

**FORMING A COMPLETE RECORD OF THE PROCEEDINGS OF ALL PUBLIC COMPANIES.**

[PRICE 6d.]

**M. R. E. SMITH, SURVEYOR, TRURO,** respectfully informs gentlemen interested in Cornish Mines, that having purchased the necessary Materials, and engaged a lithographer to work for him at Truro, he is enabled to publish the PUBLICATION of MINING-MAPS, and that the following MAPS are intended to be ISSUED as early as possible:—Greenwich and the Leinant, St Austell, Liskeard, St Aust, and Helston—each at Sixpence. Early orders are requested.



## GREAT WHEAL VOR UNITED MINES, CORNWALL (TIN AND COPPER).

Conducted on the "COST-BOOK PRINCIPLE."—In 200,000 parts, or shares, of £1 each. These mines being worked on the above principle, subscribers will not be required to sign any deed, and their liability will be absolutely limited to the number of shares subscribed for.

**COMMITTEE.**  
**CHARLES JAMES ANTHONY, Esq.,** HENRY RANKING, Esq.  
 Capt. CREASE, R.N. H. W. SCHNEIDER, Esq.  
 JOHN OLIVER HANSON, Junr., Esq. AUGUSTUS A. VANSITTART, Esq.  
 E. V. NEALE, Esq.

**BANKERS.**  
 London: Messrs. Barnett, Hoare, and Co.; Messrs. Sir W. P. Call, Bart., Marten, and Co.—Hemelton: The Union Bank.

**SOLICITORS.**  
 Messrs. Jenkinson, Sweeting, & Jenkinson, London; Messrs. Grylls & Hill, Helston. Brokers—Messrs. Moxon, 3, Austinfriars, London.

**OFFICES.**—17, GRACECHURCH-STREET, CITY.

These MINES, formerly worked to so much advantage, are situated chiefly in the parish of Breage, near Helston, in the county of Cornwall, embracing Old Wheal Vor, Carleen, Polladras, Polrose, and other mines, in the clay-slate formation, adjoining the granite, and constitute a continuous run, above two miles long by one broad, of ground which long experience has proved to be one of the richest mineral districts in the world. They are held under mining leases for 21 years, from His Grace the Duke of Leeds, Charles Trevelyan, Esq., Christopher Wallis Popham, Esq., Sir John Y. Buller, Bart., and others, at the very moderate rates of 1-3rd for the principal portion of the ground, and 1-4th for the remainder.

The mines (to which much new and rich mineral property has been added) during the whole term of the former workings, and up to the time of the cessation of the works, yielded large profits. The official returns from the ore-bodies show that during the last workings upwards of £2,000,000 sterling of tin and copper ore (yielding large dividends), have been returned from these mines; and they are still capable of producing as much more, a large proportion of the richest part being still unexploited, and a still larger proportion unexplored.

The causes (now, happily, no longer in existence) which, about eight years ago, led to their being stopped, were principally the following:—1st. Chancery suits amongst the adventurers themselves, arising from an illegal, or presumed illegal, sale of shares (but not affecting the title to the mines), which were obstinately contested for about 30 years, lessening the profits by about £200,000.—2d. In consequence of the above state of things (after the leases had run out), grants from six months to six months only could be obtained from the lords for working the mines—a circumstance which sufficient to prevent the former adventurers from developing their wealth, or making the outlay which was absolutely necessary for renewing the machinery and pitwork, which, from lapse of time, and mere wear and tear, had become unequal to its duty, but the replacing of which would have required an expenditure which no company whatever, as half-yearly tenants, could have ventured to incur.

There are numerous large tin and copper lodes, of ascertained richness and value, running through the whole length of this property, all of which can be made immediately available, and which, when properly worked, will return large profits to the adventurers.

The advantages which the proposed company will have over the former adventurers are numerous and important; it will suffice to mention the following:—They will acquire extensive works, far exceeding in value the sum of £50,000, to be given for them. There are large quantities of ore, which can be raised out of the ground already opened, when, by the erection of the machinery, the water has been drained to a shallow level; and a steady and constantly increasing supply can be afterwards kept up. There are large quantities of ore of an inferior quality, left by the former adventurers, in the various levels, from the surface to the bottom of the mine, neglected when tin ore was at the rate of £35 per ton, but which, with tin ore at £45 per ton (the present price being £60 per ton) will return a handsome profit. At the period when the mines stopped working, the vast mass (or, as it is termed "More") of tin in the main lode, which produced such extraordinary returns, was left going down in the bottom of the mine as large and as valuable as it ever was. Under the improved system of mining which will be adopted (and mining was never so well understood, or so economically conducted, as at the present moment), great savings will be effected in the following items:—

On labour cost, from the use of a man-engine for conveying the miners without any useless expenditure of time and strength to and from the bottom of the mines	£25 per cent.
On the cost of drawing the ores	15 per cent.
On the cost of dressing the ores	20 per cent.
On the cost of drawing the produce to the surface, owing to the modern improvements in the machinery used for such purposes	50 per cent.

The proposed company will also have the benefit of long leases, enabling them to develop the resources of the mines in a lasting and certain manner. The levels already driven, shafts sunk, and ground opened at a great expense, will be of incalculable value in extending levels on the course of the lodes, and driving "cross-cuts" to intersect the parallel (or "side") lodes at different depths.

From the attention of the former adventurers having been engrossed by the amazing riches of their main lode, these side lodes, though proved to be exceedingly rich wherever they have been touched, were never worked to any depth. When this is done, the same rich discoveries may be expected as so recently rewarded the adventurers in the United Mines in Gwynedd, where, under similar circumstances, the discoveries made in the side lodes immediately returned large profits.

Estimates, compiled from sources entirely to be relied on, show that an expenditure of £100,000 will suffice to bring these mines into a perfect and lasting working condition, which expenditure is apportioned as follows:—

For machinery, including steam-engines of the highest power, for pumping, hauling, stamping, crushing, and a man-engine	£43,000
Materials	12,000
Labour cost	25,000=80,000
Leaving for contingencies	20,000

The returns, calculated with tin ore at only £45 per ton (the actual rate being now £60 per ton), are estimated as follows:—

For the first year (while the drainage of the mines is proceeding)	£20,000
For the second year	60,000
For the third year	80,000

And afterwards progressively, with a prospect of still further increase in subsequent years.

The mines are divided into 200,000 shares of £1 each, thus forming a sum of £200,000, of which £100,000 will be devoted to bringing the mines into full and efficient working condition; £50,000 will be available for working capital; and the remaining £50,000 will be the consideration to be paid to the grantees, of which sum £7000 will be paid in cash for the immediate expenses incurred by them, the remaining £43,000 will be paid in 43,000 paid up shares, which will remain under the control of the committee until dividends shall have been declared to the amount of 10 per cent. on all the shares of the company. This arrangement has been proposed by the grantees, in order to mark in an emphatic manner their confidence in the result. The shareholders shall have the power, at their first meeting, to appoint two auditors, who shall also be shareholders, one of whom shall go out by rotation annually, but be eligible for re-election.

Reports from mine agents of character, capacity, and experience, and from practical miners who have worked in these mines for the greater portion of their lives, are appended to the prospectus, which may be obtained of the Committee, at the temporary offices of the Company, 17, Gracechurch-street, City; or from the brokers, to either of whom applications for shares, in the annexed form, may be made.

### FORM OF APPLICATION FOR SHARES.

Great Wheal Vor United Mines, No. 17, Gracechurch-street, City.  
 TO THE COMMITTEE.—GENTLEMEN: I request you to allot me shares in the above undertaking upon the terms of my prospectus, and I agree to accept the same, or such lesser number as may be allotted to me, and to pay the sum of £1 sterling per share thereon when required, and to abide by the rules, conditions, and regulations of the Cost-book of the said mines.

Name .....  
 Address and Occupation .....  
 Date .....  
 No reference will be accepted unless it be given to a banker or stockbroker.

## GREAT WHEAL VOR UNITED MINES.—The public are respectfully informed, that the OFFICES of the above Company are now MOVED from 1, Royal Exchange-buildings, to 17, Gracechurch-street.—Dec. 30, 1847.

## EAST WHEAL VOR TIN AND COPPER MINE, NEAR HELSTON, CORNWALL.

TO BE WORKED ON THE COST-BOOK SYSTEM.  
 Does, 1-18th; Lease, 21 years.—In 10,000 shares, of 21s. each.

**COMMITTEE OF MANAGEMENT IN LONDON.**  
**JOHN EDENEZER DUNT, Esq.,** Cockspur-street  
**GEORGE BURGE, Esq.,** Shaftesbury-terrace, Finsbury  
**JOHN REYNOLDS CARLIN, Esq.,** Gracechurch-street.

**BANKERS.**—The Union Bank of London.  
**BROKERS.**—Messrs. Foster Brothers and Co., 27, Tokenhouse-yard, London.  
**PRINTER.**—D. G. Gostley, Esq.

**OFFICES.**—75, CORNHILL, LONDON.

This mine is situated in the richest tin district of Cornwall, and joins the celebrated tin mines Great Wheal Vor and Great Work, in the junction of the granite and killas formation, where the greatest mineral deposits are invariably found. The deepest part of the mine is only 55 fathoms; whilst the adjoining mine (Great Wheal Vor) raised the greatest part of its ore below that depth, and it was rich at 360 fathoms from surface, and has given a clear profit of upwards of £600,000. This mine is to be re-worked by a new company with a capital of £200,000, in shares at 21s. each; whilst it is proposed to sell 6000 of the above 10,000 shares at 21s. each, which is considered sufficient to supply the requisite machinery, and to bring the mine into a most profitable and dividend-paying state.

Applications for shares to be made to Messrs. Foster Brothers and Co., Tokenhouse-yard; Mr. R. Tripp, 8, Michael's-alley, Cornhill; Mr. H. Lascombe, Plymouth; Messrs. House, Barton, and Co., Dublin; Mr. T. Dewhurst, Bradford, Yorkshire; or to the offices of the mine, 75, Cornhill, where plans and prospectuses may be obtained.

## ALLSOPP'S PALE OR BITTER ALE.—

The unanimous opinion of the most eminent scientific and medical men of the day, of Baron Liebig, Messrs. Graham, Hoffman, Murratt, Watson, Budd, Marshall, Hall, Travers, Ferguson, Rowe, Vivian, Heygate, Leman, Arnold, Evans, Forbny, Petrie, Macerrie, Vose, Tuffnell, Hunter, Davies, Jones, Senior, Maclearen, Macaulay, Gray, Teevan, Hill, Hayward, Harrison, Pepper, Inman, Sir Charles Clarke, the Sanitary Commissioner of the Lancet, &c., (many of them after careful analysis, and all of them after long experience), having been pronounced in favour of the healthful and invigorating qualities, as well as the highly dietetic properties of their PALE and BITTER ALES, Messrs. ALLSOPP and SONS do not feel themselves called upon to go into any further vindication of their justly popular beverage, from the aspersions of malicious and interested parties; but content themselves by announcing that they have commenced supplies from the brewing of this season.

ALLSOPP'S PALE OR BITTER ALE may be obtained in casks of 18 gallons and upwards, from the Brewery, Burton-on-Trent; and from the under-mentioned branch establishments:—London, at 61, King William-street, City; Liverpool, at Cook-street; Manchester, at Ducle-place; Dudley, at Burnt Tree; Glasgow, at 115, St. Vincent-street; Dublin, at Ulster Chambers, Dame-street; Birmingham, at Market Hall; at each of which places a list of respectable parties who supply the beer in bottles and casks at the same prices as from the brewery, may at any time be seen.

## PRIGNANT CONSOLS SILVER-LEAD MINING COMPANY, CARDIGANSHIRE, SOUTH WALES.

Divided into 12,000 parts or shares of £1 each.—Subject to no further call or liability.

**WILLIAM SPOONER, Esq.,** Oxford and Cambridge Club  
**ROBERT GORDON, Esq.,** Broadview House, Great Yarmouth  
**ALEXANDER DUNCAN, Esq.,** H.E.I.C.S., 11, Ladbroke Villas, Notting Hill  
**FREDERICK LEITH, Esq.,** Walmer-courts, Deal  
**FREDERICK BLANCHFORD, Esq.,** Albion Lodge, Leighton, Essex  
**THOMAS P. THOMAS, Esq.,** 75, Old Broad-street.

**BANKERS.**—London and Commercial.  
**CONSULTING ENGINEER.**—Mr. Matthew Francis.

**AGENTS OF THE MINE.**—Capt. Henry Tyack.  
**AUDITORS.**—Mr. George Batters and Mr. John Wrench.

**SOLICITORS.**—Thomas Birch, Esq., 12, Warwick-court, Gray's Inn.  
 Prospectuses to be had of the secretary, Henry Watson, Esq., at the

**OFFICES OF THE COMPANY, 3, GEORGE-YARD, LOMBARD-STREET.**

THE PRIGNANT ESTATE is situated over the great lode that is now yielding such an immense fortune at Frongoch. The Old Frongoch map, on which Sir Henry De la Beche has traced the Cardigan line, shows this lode vein branching into two parts and running through the grant. The East Frongoch Mine Company are sinking a shaft on the Crown property to the westward, and have erected a water-wheel for the purpose of cutting the lode at a depth of 30 fms., showing that they have strong faith in the bearing qualities of the vein there. To the eastward, the South Wales Mining Company are working upon the same lode, and some thousands of pounds worth of ore has been sold at one of their mines called Bodol, upon it. There cannot be the slightest doubt but that a very little outlay in open cross-cutting this grant will lay open the lode, and when it is understood that Frongoch Mine alone pays £13,000 a year profit, some slight estimate may be formed of the value of this set.

Prigrant estate is situated in the parish of Llanfihangel Croydon; it lies about one mile south of the Devil's Bridge, one mile west of Bodol Mine, two miles north of Logylas Mine, and one mile to the east of the celebrated Frongoch Mine, which rich lode runs through more than a mile of this property, and when opened on, will doubtless become one of the standing mines of the county of Cardigan.

London, Oct. 27, 1852.—Dear Sir: I beg to hand you herewith a hand sketch and some letters I have received from the Prigrant Estate, which, according to the more recent and careful inspections, appears to contain the Frongoch lode for a much longer distance than I expected, and, consequently, the set is much more valuable than I calculated upon. In addition to the celebrated Frongoch lode, it appears that this grant contains the lode of the Bodol and Llanfihangel Mines, which, to the east of Prigrant, has made a great deal of ore, and it is supposed that these will make very good mines, and as Prigrant is nearer the Great Frongoch Mine, I believe that the veins will be found very productive in this set. When I wrote you first, it was only a matter of theory that the Frongoch vein passed through Prigrant; but the last letter from there puts the matter beyond the possibility of a doubt, as it states that one of the lodes has been found. While a note from Mr. Grieves (our agent at the Rhodol Mines) says the lode passes through the grant for the length of a mile, which is quite sufficient for all mining purposes. In addition to this, a gentleman largely interested in East Frongoch and Bodol, has applied to me to join a portion of his mining ground to our grant, affording sufficient evidence of the value of the mining ground along this range of veins. You will observe also that the East Frongoch shares have gone up to £5 and upwards per share, although they have not advanced in mining much further than the Bodol and Llanfihangel Mines, and are saleable at £250 per share, some 15 fathoms deep, but, like our veins, they have so far only seen the lode at the surface. You will, therefore, see that we are justified in valuing our grant highly.

Henry Watson, Esq.  
 This valuable mine is held under a take note, with an agreement for a lease, from the Rev. W. H. Morris, at the very low dues "for Cardiganshire" of 1-18th; the proprietors, having proved the value of the grant, retain for themselves half the number of shares, so only 6000 will be issued to the public. From the opinion of several eminent mining engineers, not more than £3000 will be required to make this mine equal to her neighbours, the Lisburne Mines, which, on a small outlay on 100 shares, are now making profits of £15 per share every two months, and are saleable at £250 per share. Applications for shares to be made to Messrs. Edmund Solihull, Esq., 33, Royal Exchange, and Stock Exchange, at the offices of the company, and of the following brokers:—John Watson Hamilton, Esq., 14, Waterloo-street, Birmingham; Luke Arnold, Esq., New Buildings, Small-street, Bristol; Edward Fox, Esq., 31, Dame-street; John Power, Esq., 22, Fowne's-street, Dublin; Munro Hugh, and Co., 4, North-street, David-street, Edinburgh; Charles Wilkinson, Esq., 2, Exchange-buildings, Hull; George Wise, Esq., 59, Albion-street, Leeds; Ebenezer Smith and Son, 1, George-street, Sheffield; George Fielding, Esq., 14, Royal Exchange Arcade, Manchester.

### FORM OF APPLICATION FOR SHARES.

To the Directors of the Prigrant Consols Mining Company.

GENTLEMEN.—I request that you will allot me shares in the above company, on which I undertake to pay the deposit of £1 per share.

Name and surname in full.....  
 Residence.....  
 Description.....  
 Reference.....

## WHEAL COCKE COPPER AND SILVER-LEAD MINING COMPANY, ST. ENODOR, CORNWALL.

In 6400 shares.—Deposit 10s. per share.

TO BE CONDUCTED ON THE COST-BOOK SYSTEM.

**BANKERS.**—The Royal British Bank, Tokenhouse-yard, Lothbury.  
**SECRETARY.**—Mr. Thomas Addis.

**OFFICE.**—No. 3, HATTON COURT, THREADNEEDLE STREET.

### PROSPECTUS.

This valuable and extensive SETT, situated in the parish of St. Enodur, CORNWALL, on the main road to Truro, immediately adjoining the Chyprase Copper Mine, and in the vicinity of East Wheal Rose, a well known silver-lead mine, is held under a lease for 21 years at 1-18th dues.

The Mine was worked under local management from 1821 to 1824, with an engine of only 24 inch cylinder, and with very successful results, as illustrated by the subjoined statement;—but after that period the general monetary depression that ensued destroyed, for the time, public confidence in all, even the most promising commercial adventures, and this mine was then brought to a standstill from want of the additional capital required for the purchase of machinery adequate to extend the successful working of it.

A large amount has been expended in driving adit and other levels, and sinking engine and other shafts to the depth of 40 fms. from the surface; during those workings considerable quantities of copper and lead ore were raised, of a quality to command a high value in the market; the price realised for the copper ore at that time ranging between £5 5s. and £8 12s. 6d. per ton.

The following is an account of the ores sold in the year 1823:—

	Price per ton	Amount.
January 2	54 0s. 0q.	£7 8 6
March 6	48 12 0	419 3 6
April 10	31 18 0	610 0
May 1	33 6 0	6 5 6
June 5	48 16 2	6 0 6
August 7	70 16 3	7 11 6
October 9	72 0 0	6 8 6
Lead	12 12 0	12 12 0
December 11	52 12 0	5 5 0
Total		£2828 11 6

\* This lot consisted principally of the refuse of the lode, which will account for the decrease in price.

These returns realised a profit of nearly 50 per cent. on the outlay; it is fair, therefore, to calculate, that had the undertaking been fully and efficiently developed, a very large percentage would have continued to be realised. It is confidently expected that the returns will be considerably increased when the mine is worked at a greater depth.

The present company will derive the advantage of the shafts and levels already driven, a considerable saving both as regards time and outlay—and so strong was the expectation of the former owners that their operations would be renewed, that they left undisturbed all the pumps, rods, stays, ladders, miners' tools, cisterns, &c., underground.

The course of ore already discovered, both of copper and lead, may be broken so soon as the water is drained off, which can be accomplished within a very limited period after the erection of a steam-engine.

The lessees having full confidence in the value of the undertaking, are content to accept 1400 shares, free of calls, to the extent of £1 10s. per share, and a sum of £2000 to be paid in cash out of the first deposit, in consideration of the lease and the work already done. The lessees engaged to retain the value of these shares until the deposit on the remaining 5000 shares shall have been paid.

Applications for the remaining unappropriated shares may be made to Mr. William Lee, 3, Hatton-court, Threadneedle-street; Mr. John Davies, Exchange-alley North, Liverpool; or Mr. John Miller, Bradford, Yorkshire; where prospectuses, reports, and every information may be obtained.

### REPORT OF CAPT. THOMAS SYMONDS.

In compliance with your request, I beg to send you a report of the above mine.

This mine ceased to work about 27 years since. During its working a 24-inch cylinder steam-engine was erected, which drained the water to the depth of 40 fms.; and during its working considerable quantities of copper and lead ore were raised, of a quality to command a high price in the market. There are four lodes in the set discovered; one bearing north and south, and the others east and west. On the north and south but little was done, but on the east and west a large quantity of superior copper and lead ore was raised. The ore appeared to be increasing in depth; but, from the want of sufficient steam power, and the means of erecting additional machinery, the works were suspended.

It is my opinion, that if a powerful steam-engine was erected (say 50 inches), with other necessary machinery, it would be a permanent and profitable mine; indeed the prospects fully justify such outlay. The north and south lode forms a junction with the other lodes in the set, where I would particularly recommend a special trial to be made, having no doubt as to the successful result. I draw my conclusion from having personally inspected the lodes prior to the suspension of the works, and broken therefrom, at the depth of 40 fathoms, some fine stones of copper ore.

### UNDER THE PATRONAGE OF THE QUEEN, AND THE PRINCIPAL NOBILITY.

**ROPER'S ROYAL BATH PLASTERS** supersede the use of inward medicines for Coughs, Asthma, Hoarseness, Indigestion, Palpitation of the Heart, Croup, Hooping-cough, Influenza, Chronic Strains, Bruises, Lumbago, Spinal and Rheumatic Affections, Diseases of the Chest, and Local Pains. These truly invaluable plasters are compounded on medico-chemical principles, from British herbs and gums and balsams of the finest quality; have the words "ROPER'S ROYAL BATH PLASTERS" engraved on the Government stamp; and signed on the back "ROPER & SONS." Prepared only by Robert Roper and Son, chemists, Sheffield, who possess a large number of testimonials, from highly respectable parties, of cures effected in numerous varieties of the above diseases. Full sized plasters, 1s. 1½d., for children, 9½d. each; or direct by post on receipt of 1s. 4d., or 1s. 6d., and in tins for the use of hospitals, unions, family use, and charitable purposes, at 4s. 6d., 21s., and 35s. Sold by most medicine vendors.

Beware of Imitations.—Ask for ROPER'S PLASTER.

## ASHFORD CONSOLS COPPER AND SILVER-LEAD MINE

SITUATE IN THE PARISH OF LLANIDLOES, MONTGOMERYSHIRE, NORTH WALES.

CONDUCTED ON THE COST-BOOK PRINCIPLE.  
 In 6000 shares of £1 each.

**OFFICES.**—5, ADAMS COURT, OLD BROAD STREET, LONDON.

The set extends for about 4½ miles in length, and nearly 1½ mile in breadth. There are all necessary buildings and erections on the mine, with seven valuable lodes, fully laid open, and a good parcel of ore ready for the market.—Applications for the remaining shares to be made to the secretary, at the offices of the company, where plans and prospectuses may be had.

By order of the Board,  
**GEORGE EDWARD FENTON, Secretary.**

## SOUTH ALFRED CONSOLS COPPER MINE, HAYLE, CORNWALL.

CONDUCTED ON THE COST-BOOK PRINCIPLE.  
 In 5000 shares of £1 each.

**OFFICES.**—5, ADAMS COURT, OLD BROAD STREET, LONDON.

This set is of ample extent, being 600 fms. from east to west, and 400 fms. from north to south; and the lease is for 21 years, at a royalty of 1-15th. The rich and well-known lode of the Alfred Consols has been discovered in this set.—Applications for the remaining shares to be made to the secretary, at the offices of the company, where plans and prospectuses may be obtained.

By order of the Board,  
**GEORGE EDWARD FENTON, Secretary.**

## LONDON AND WESTMINSTER THAMES RAILWAY.

(Provisionally registered under the Act 7 and 8 Vic., cap. 116.)  
 Capital £200,000, in 10,000 shares of £20 each.—Deposit £2 per share.

**DIRECTORS.**  
**ROBERT W. KENNARD, Esq.,** Upper Thames-street, Deputy-Chairman of the Northern and Eastern Railway Company.

**EDMUND BURKE, Esq.,** Norfolk-road, St. John's-wood.  
**ROBERT FISHER, Esq.,** Highbury-park.

The Hon. R. E. HOWARD, Garden-court, Temple.  
**Col. PERCEVAL, Esq.,** Belgrave-road, Piccadilly.

**THOMAS D. RITCHIE, Esq.,** Cumberland-street, Hyde-park; and Drumlamford House, Ayrshire.

(With power to add to their number.)  
**ENGINEERS.**—Messrs. Liddell and Gordon, 24, Abingdon-street, Westminster.

**ACTING ENGINEER.**—George Spencer, Esq., 15, Chesapeake-street, Westminster.

**SOLICITORS.**—Messrs. Malby, Robinson, and Jackson, Bank-buildings, Lothbury.

**PARLIAMENTARY AGENTS.**  
**Messrs. Law, Holmes, Anton, and Turnbull, 18, Fladater-street, Westminster.**

**BANKERS.**—Messrs. Heywood, Kennard, and Co., 4, Lombard-street.

**SECRETARY.**—Mr. T. E. Weller.

**BROKERS.**—Mr. W. Mello, 80, Old Broad-st.; Messrs. Johnston and Walker, Manchester.

**TEMPORARY OFFICES.**—18, CANNON STREET.

### PROSPECTUS.

The object of this undertaking is to construct a railway and a commodious roadway along the Middlesex side of the River Thames, between London Bridge and Westminster Bridge; and within the lines of the Thames embankment recommended by the Metropolitan Improvement Commissioners, in 1844.

The railway will have three lines of rails at least; and the roadway carried above the railway, will form a spacious and open thoroughfare.

The length of the line will be 2 miles 2 chains. The railway and roadway will be supported on cast-iron columns and wrought-iron girders, in such positions and at such levels as will allow free access to the wharves at all times of tide. The mode of traction, whether by locomotive or stationary power, will be submitted for the consideration of the Committee on the Bill.

By the railway, which passes under the bridges, passengers will be conveyed from London Bridge to Westminster in six minutes, and to and from all intermediate stations in proportionally less time.

The roadway would relieve the present main thoroughfares of a great part of the overwhelming traffic that now encumbers them, and would also form a splendid public promenade at the level of the bridges and communicating with many of the streets leading to the river, where there would be railway stations.

An examination of the elements of the enormous traffic now existing between the termini and the several stations of the proposed railway, leaves no doubt that at an average charge of 1½d. per passenger, the receipts will be sufficient to secure a steady and large dividend on the capital proposed to be raised, and which amply provides for every contingency.

Plans are in course of preparation by which this line will be joined with all the railways having termini in London; a feature which it is only necessary to mention to show its value as a public convenience and commercial investment.

The necessary parliamentary notices have been given for the railway, but not for the construction of the roadway; and this portion of the plan will be deferred for another session, should such consents as are necessary to obviate the absence of the parliamentary notices not be obtained. In case the railway only is sanctioned in the present session, the amount of capital required will be necessarily much reduced.

Information on all points connected with the scheme may be obtained at the company's offices, 18, Cannon-street, City.

Application for shares, in the annexed form, may be made to the solicitors, the secretary, or the brokers.

Estimates of the Railway Traffic and Revenue, exclusive of the Roadway.

The number of persons who pass between the terminal points of this railway has been carefully ascertained to be upwards of 150,000 daily. Assuming that only one-sixth adult of the superior advantages of this mode of transit, the traffic may be calculated to give the following result:—

1st Class, 5000 at 3d. .... 62 10 0  
 2nd do. 7500 at 2d. .... 62 10 0  
 3rd do. 12,500 at 1d. .... 25 10 0

£177 10 0 (being less than the present steam boat traffic) ..... £177 10 0

£177 10 0 x 365 = per annum ..... £64,635 11 0



## Meetings of Mining Companies.

## THE AUSTRALIAN MINING COMPANY.

A special general meeting of proprietors was held at the London Tavern, Bishopsgate-street, on Thursday, the 30th Dec., for the purpose of receiving the directors' report on the result of Captain Hitchens' inspection of the company's property in Australia, and to take all such measures thereon as may be desirable.

R. F. DAVIS, Esq., in the chair.

Mr. PIER (the secretary) read the notice convening the meeting, and the following directors' report:

At the annual general meeting in July last the directors reported, that as soon as they should have had the benefit of personally communicating with Captain Hitchens, on his return from Australia, an extraordinary general meeting would be called to consider the course to be taken for the further promotion of the interests of the shareholders. The written report of Captain Hitchens has lain at the company's office for some time, open to the inspection of the shareholders, and this, with the specimens of ores brought by that gentleman, and exhibited at the same place, has afforded ample opportunity to all interested to become minutely acquainted with the geological character of the company's property, the estimate formed by Captain Hitchens of past operations, and his views as to the future.

This report will, therefore, only deal with the general conclusions founded on this document, and with the course of proceedings which, in the present extraordinary position of affairs in the colony, appear to be most advisable.

1.—As to the past, it is evident from Captain Hitchens' report, and also from other sources accessible to your directors, that the company's business in the colony, as well as their mining operations, have been carried on in a most extravagant and injudicious manner, and that under better arrangement much expense might have been saved, and far greater returns realised. It must, however, be satisfactory to the shareholders to be assured that the past extravagance has long since been effectually and finally arrested.

It is equally evident that the Tungkill Mine has not been properly tried, and that there exists good ground for anticipating profitable returns from those operations which Captain Hitchens recommends, and which he believes may yet result in the discovery of remunerative deposits of copper ore, there being a considerable quantity of very rich ore in sight in maiden ground, that can be easily raised whenever the labour market returns to a normal condition. These operations are minutely indicated in the report, and need not be entered into at length.

The recent letters from Mr. Forster, the company's agent, corroborate Capt. Hitchens' views, inasmuch that so far as he has been as yet able to prosecute the trial workings referred to, the captain's most favourable anticipations have been fully realised, but the superior attractions of the gold fields were again suspending operations in copper mining, not only on the company's property but on every other mine in the colony; at the same time, Mr. Forster expresses himself with some confidence that the labour market will be in the course of a short time become more favourable.

As copper mining, however, is a business which the company intend to resume that character, it may be desirable not to rest exclusively on the Tungkill Mine, but to obtain upon equitable terms some of the many mines of promise which are ascertained to exist in the colony; and here the company will derive great benefit from the attention given by Capt. Hitchens to his more general survey. Already the directors have secured the option of leasing a mine which offers fair prospects of remuneration, but which for reasons that will be readily appreciated, the directors abstain from describing more particularly at the present time.

During his residence in the colony, the improving value of the land attracted Capt. Hitchens' attention. Of the Allen's Creek estate, nearly all the portions have been already leased upon terms which, although favourable for the time, are likely to be materially influenced for the better by recent events, considering the very advantageous character and position of this property. The company's special survey at Reedy Creek, which extends eight miles from north to south, about four miles from east to west, and contains 20,000 acres, is more or less available for pasturage or cultivation; a considerable extent appears to be suitable for dairy farms, the land generally being not overworked, and certainly better watered than most other districts in the colony, on which account its value is highly estimated by colonists fully competent to judge of its real character.

Had the company's prospects, therefore, remained in the state in which they were when Capt. Hitchens left the colony, the directors would probably have felt it their duty to the shareholders to recommend a longer exercise of patience for the natural development of the value of the land and the prosecution of such researches in mining as the state of the labour market might allow, but since his departure from the colony an entirely new state of things has arisen. Remunerative gold fields have been discovered, so near the company's property that the expectation that it may be found on the company's land, or in such proximity to it as to affect its value most materially.

As already stated by the last accounts, it appears that copper mining had been again nearly suspended, but it is most gratifying to perceive that, although the miners refused to engage for more work at copper, they so far viewed favourably the prospect of property producing gold, that they had agreed with Mr. Forster, when their engagement at copper mining ceased, to commence a search for gold, under his direction, in various parts of the company's land. In any case, it must be evident the company cannot but participate in the general advantage of the gold discoveries, and more especially having an active resident agent, prepared to avail himself of every opportunity for promoting the company's interests; and this leads the directors incidentally to notice to you how favourable a position the company occupies as compared with many others.

It will be in the recollection of the shareholders that a large expense, not less than 30,000l., was incurred in the purchase and erection of stamping machinery at Tungkill—an expenditure incurred in times when labour was at a moderate price, and machinery could be procured in a reasonable time, and purchased at a low rate. This machinery, your directors are happy to say, is perfectly applicable to the stamping and reduction of gold ore; is situated on the borders of a never-failing creek, and worked by a powerful steam-engine. Your directors believe there is but one other stamping-engine in all the Australian colonies, and that is possessed by the Burra Burra Company. To manufacture in England, and set to work at any of the gold fields in Australia, similar machinery would at the present moment require time and cost scarcely admitting of any approximate calculation. The company have also in store at Port Adelaide, a 16 in. cylinder steam-engine, and crushing machinery ready to be fixed in any suitable locality, and so large a stock of mining implements that their agents are quite prepared to enter at the very first favourable opportunity on active operations in gold or copper mining, as may be found most suitable, without requiring supplies from England. The directors, therefore, propose to avail themselves, for the benefit of the company, of the highly favourable circumstances indicated; to hold themselves in readiness to work either gold or copper mines in connection with the resources of their present property, and not to neglect any of those accessory operations, such as the purchase of gold dust and the reduction of gold ore, which promise profit, and will be entered upon as circumstances may render desirable.

In fact, whilst abstaining from costly dead work, to enter upon such business as may promise a speedy return, and for which their past experience and their position in Australia gives them advantages possessed by few others.

The directors cannot close this portion of their report without alluding to the very highly satisfactory way in which Captain Hitchens has fulfilled his mission, both in protecting the company's interests, and in reporting upon their property generally; and it affords them pleasure to hope that his services may be made more extensively available for the company's interest.

The same opportunity enables the directors to inform the shareholders, that the very favourable opinion they were led to form of Mr. Forster has been in every way borne out by his further experience, and they have again to record their high sense of the valuable aid they have received from Mr. Robert Davenport in the colony.

Under the 14th section of the company's deed, the directors are empowered to apply for a charter or an act of incorporation. The expediency of applying for the former has for some time been the subject of consideration; but with that caution which they trust has guided all their acts, the directors have deferred doing so until they were in a position to state that they had received from the Government the most valuable character. Although, for the want of labour, their copper-mining operations were suspended; from the fact of gold being discovered within seven miles of their property, it was highly probable they should discover it in their own grants; but heavy rains had, up to last advice, prevented the proper researches being made. The gold companies established in London had gone to enormous expense for the necessary machinery, while they had the means of crushing 30 tons of auriferous quartz per day, should it be found in their vicinity; he believed, at present, there was the only stamping power in the colony except the Burra Burra; and that they might derive competition in that particular description of business. The chairman then took a thorough review of the report, and in answer to Mr. Anderson, said their finances were in an easy position; they were not in want of money; it was true, they had the liabilities of their loan-notes to meet, but he was happy to say the largest holders were willing to renew at a reduced rate of interest.

Mr. ANDERSON said, he believed he had attended every meeting of the company; and he must honestly say he was never so much pleased at their position and prospects, or with any former report as on the present occasion. He had no doubt their property under former management in the colony had been shamefully neglected, and thus the shareholders had been robbed; he thought they were greatly indebted to the directors for bringing them into their present position.

Mr. ASHFIELD was also highly pleased with the report and with their present prospects; but had hitherto been much disappointed. He had from the first held several hundred shares, and should certainly endeavour to increase the number. The real value of their property had yet to be developed. The River Murray, the finest in South Australia, flowed a few miles south of their property, and a project was now on foot for rendering it navigable to a considerable distance above; and this in conjunction with the railway, which would shortly be completed, from Adelaide to the port, would render their property incalculably and greatly increase the value of their land. They had been some time since recommended by Capt. Hitchens to divide their arable land into farms of 500 acres each, which they could let at 60l. per annum, thus producing an income of upwards of 2000l. a year from this source alone; what, then, would it not be worth when Adelaide, the depot from which the principal supplies of the colony must flow, was brought into almost immediate approximation? If they found no gold on their land, their copper mines and farming land would, he felt sure, under proper management, make them a good return.

Mr. BRANDT had, for a long period, taken great pains to arrive at a knowledge of their true position, and took a similar view.

A PROSPECTOR enquired if any iron ore had been discovered on their property, and whether it was in contemplation, at any future period, to manufacture iron?

The CHAIRMAN said, there certainly was ironstone of the most valuable character on their estate; but as to manufacturing iron, that must be left to private enterprise, which at a future day would doubtless be directed to it. They had had sufficient warning by the fate of iron companies here to attempt it.

Mr. ASHFIELD said he had been informed, on good authority, that in Sydney there was 1,000,000l. sterling hoarded up for the sole purpose of purchasing land, of which no doubt they should reap some benefit.

After some conversation as to the supply of labour, thanks were voted to the chairman and directors, Captain Hitchens, Mr. Forster, and R. Davenport, Esq., the latter gentleman as a resident of the colony, having lent valuable assistance, when the meeting broke up.

## CALLINGTON MINES COMPANY.

At the bi-monthly meeting of shareholders, held at the offices, Salvador House, Bishopsgate-street, yesterday, —PETER STAINERY, Esq., in the chair,—the notice convening the meeting having been read, the report from the agent followed:—

December 26.—South Mine: The rise in back of the 125, on the lead lode, is up 5½ fms. The winze sinking below the 112, against this rise, is now sunk 4½ fms.—we hope to make a communication here by the middle of Jan., then we shall have some probable tribute ground laid open and made available. The incline shaft is now sunk 24 fms. below surface, the ground is not so favourable as last reported, there being much spar intermixed with the killas, or clay-late; no lode has been taken down since last report. The lead pitches are much as usual. Kelly Bray shaft is now sunk 3½ fms. below the 70—ground favourable for sinking, and now set at 15l. per fm.; the lode is 3 ft. wide, composed of spar, mundle, blende, and good stones of copper ore. The 70 cross-cut north is now driven 19 fms., the ground is still very much mineralised, there being several branches intersected in the last 2 fathoms, all dipping north, which indicates that we are nearing the lode; the lode in the 70 end east is 1 ft. wide, yielding 1 ton of copper ore per fm., worth 5l. per ton; the lode in the 70 back stop, yielding 1 ton of copper ore per fm., worth 5l. per ton. The lode in the 60 end east is 1½ ft. wide, yielding 2 tons of ore per fm., worth 4l. 10s. per ton. The copper pitches are just as usual. We intend sampling a parcel of copper ore on Friday next at Cotehill Quay, about 70 tons. We shall, also, have made marketable by the end of this week a small parcel of tin, about 1½ tons, of good quality.

After which the financial statement was submitted:—

Balance of last account	£4538	2	0
Cost for Sept., 643l. 3s. 10d.; Kelly Bray, 189l. 9s. 7d.	832	15	0
Ditto Oct., 573l. 3s. 10d.; Kelly Bray, 202l. 0s. 11d.	775	4	9
Interests and discounts	34	13	7
Copper ore sold from Kelly Bray, 237l. 1s. and 267l. 10s. 8d.	505	0	8
Silver-lead sold 3d November	423	12	7
Sale on 29th Sept. of steam-engine and old materials	1595	18	11
Thirty-third instalment, made 30th Sept., of 10s. per share	2500	0	0
	5021	12	2

Showing debtor balance

It was resolved that the report and accounts submitted be passed, errors and omissions excepted, and that a call of 3s. per share be made payable to the treasurer on or before the 15th Jan., to liquidate the balance.

A discussion ensued, when it appeared that four or five parties had not responded to the last call. It was, therefore, resolved that, in accordance with rule 18, a special meeting be convened for the 19th Jan., for the purpose of forfeiting all shares upon which any call or calls then due shall remain unpaid.

Mr. THOMAS WATSON observed that the shaft at Kelly Bray is sinking below the 70 fm. level at 15l. per fm., the cross-cut gone through 19 fms. of highly mineralised ground, and the prospect generally has materially improved. A call of 3s. per share was recommended on the 19th, therefore, advice one to be made forthwith, and the few in default of the last receive due notice thereof.

The meeting terminated with the usual compliment to the chairman, and the parties separated.

## CWMDFLE ROCK AND GREEN LAKE COPPER MINING CO.

The bi-monthly meeting of shareholders was held at the Queen's Arms Tavern, Cheapside, on Thursday, the 30th of December.

JOHN WEBSTER, Esq., in the chair.

Mr. HENRY PALMER (the purser and secretary) read the notice convening the meeting, which had been forwarded to every registered shareholder—it being the intention of the committee for the future to observe the latter practice, they having no means of compelling shareholders who had not registered to do so, and, therefore, could not recognise them in any other way.

The CHAIRMAN read over the minutes of the last meeting, held on the 21st of Oct., which were unanimously confirmed. He then read the balance-sheet:—

Balance, as per last statement	£114	4	0
Received for deposit and arrears on shares	154	18	6
Premium received on 112 of the above shares	224	0	0
Temporary loss	180	0	0
Received from manager and purser on account of shares	50	0	0
Salary charged for services, but not received by them	155	8	0
Credited last account for 37 shares, not delivered, and still in the capital stock of the company	£37	5	0
Paid October cost	267	11	7
Paid November cost	451	7	9
	758	4	4

Leaves balance to next account

The liabilities being—Temporary loan	£150	0	0
One year's interest on preference shares	720	0	0
Current cost for Dec. and Jan.	560	0	0
	1430	0	0

Mr. SOWELL observed that there were very great irregularities in the preceding accounts; and he did not approve of the manner in which they had been kept. He trusted they would henceforth start correctly, and maintain the system. He was not a trusted shareholder at the last meeting; and required now to know whether the 6000 shares paid-up stock were entitled to receive 720l. per annum, as announced in the Mining Journal?

The CHAIRMAN said, certainly. He was at the mine about ten days since, and witnessed the first shipment of 26 tons, which he had since ascertained had arrived safely at its destination, and would shortly be disposed of. All had progressed in the most satisfactory manner; but he was sorry to observe that the storm of Sunday had done very serious damage to the launders, and other surface erections, making a perfect wreck of them. He would now read Capt. Colliver's report:—

Since the last meeting I have been engaged in getting various surface erections complete for the more speedy mode of working our ores marketable. I had several objects in view during the first month, as I was in great want of proper materials conveyed on the mine previous to the arrival of our own horses and carts. The weather has been so very boisterous that we have been for many days not able to do anything at surface, but I am happy to inform you these obstacles are now nearly all surmounted, and I hope the period is near at hand of our making large and regular returns of ore, of which we have a large quantity accumulated throughout the mine. We have now the incline laid down to No. 1 level, the shafts to Price's, 60 fms. of ground-work ready to lay down, the tramway from Price's to No. 5 level; in this level we have made a large road for the reception of the ore we have broken in this and No. 6 level; also walled up a large shed for the convenience of the dressing, mauling a new floor in No. 2 level, completed the new cottage, cleared and laid the foundation of a large cart-house and store room at Pennasp, and repaired about 500 fms. of road. The excavations for the new wheel-pit I purpose commencing, so that the masons may begin their work at once. Our underground operations have been—stopping 110 fms. of ground, driving 10 fms., and sinking a winze 11 fms. The mine never before presented a more favourable appearance. The lodes throughout the different stopes in No. 1 level are yielding ore of fair quality. In No. 2 level we have a lode 2 ft. wide in the back 6 in. of which is solid copper. The lode in the end is about 1 ft. wide, 6 in. of which produces copper of first quality. At Pascoe's, in the winze we have a lode 3½ ft. wide, with good stones of copper; the stopes throughout this level are yielding some very good ore. In Price's level we have cleared out the bottom, and commenced sinking a winze in Pascoe's level, which is now 6 fms. deep; we are carrying about 5 ft. of the lode, which is of the most kindly appearance we could wish. It will be advisable to sink another winze from this level to Pascoe's, on the course of the ore ground; in case of these two winzes being sunk to Pascoe's, we shall then open out about 600 fms. of very productive ore ground. In No. 1 stopes we have a lode 5 ft. wide, good sorting work. In No. 5 level we are driving, and have a lode 4 ft. wide, producing good copper about the point of the present end; we have a winze coming down from No. 6 level in a fine course of copper. I shall as early as possible communicate these levels; when done, it will open out backs to the height of 25 fms. of good ore ground. In No. 6 level the two inner stopes are yielding a large quantity of ore; in No. 1 we have a lode 2 ft. wide, good work throughout; in No. 2 we have passed the disordered ground, and have a lode 4 ft. wide, 1 ft. nearly solid copper. The copper that has been broken from these stopes and No. 5 level has not yet been dressed, but I anticipate a large quantity of ore from these two levels. The new 33 ft. water-wheel, and 30 heads of stamps, Mr. Thomas is proceeding with as fast as possible. In conclusion, I beg to say when the mine is laid out as proposed, and the stamping power we now have ordered erected, I doubt not but that we shall have a mine which will be second to none.

He next read a subsequent letter, and the report of the committee, which need not be particularised, as it was an echo of the foregoing.

The CHAIRMAN then announced that the committee recommended a call of 1l. each on the deposit shares, to discharge the present liabilities and carry on the necessary operations. They required a further supply of horses and carts. They were erecting a 23-ft. wheel, with 30 heads of stamps, and which would go to work in March next; it is situated on the head of the stopes, at the Greenlake Mine, where 800 tons of stuff lay at grass, awaiting its completion. As there was no conveniences within five miles of the mine, they could only presently accommodate 30 miners, and as they contemplated employing more, suitable dwellings must be provided for them.

A SHAREHOLDER enquired how many of the deposit shares remained unappropriated?

The CHAIRMAN observed about 1200, as 1000 had been that day appropriated at par, on condition of using a patent for crushing ores. The reports and accounts were then unanimously received and adopted.

Mr. O'DONOHUE observed that many of the shareholders understood that the 720l. interest was not payable until the deposit shareholders had received dividends to the extent of 10 per cent.

Mr. O'DONOHUE explained that one year's interest was now due, and must be forthwith paid; when the deposit shares had paid up 2l. it would cease. Capital was required to prosecute the mines, and the proceeds of ore sold would create a dividend fund. He would now read the 12 rules and regulations which were to govern the company henceforward; they were strictly in accordance with the Coal-Work System.

They were accordingly read and unanimously confirmed; it being in the power of shareholders jointly holding 500 shares, at any time to call general meetings for any special purpose.

Mr. LEITCH rose to propose a call of 1l. per share on the deposit shares, which was seconded and carried unanimously.

The CHAIRMAN then stated that the committee proposed placing the parties who had taken the 112 shares at 2l. prem. on an equal footing with the party who had purchased the 1000 shares, by giving them 224 additional shares, and then distributing all that remained *pro rata* among the shareholders. A long discussion ensued upon this subject.

Mr. O'DONOHUE stated that he represented several working men who had embarked their money under the impression that, by the disposal of shares at 2l. and 3l. prem., ample capital would be procured to work the mine into a dividend state, without the necessity of making any call on the deposit shares, which some of them would be unable to respond to.

Mr. ARCHBOLD and Mr. RICHARD HUMPHRIES were unanimously added to the number of gentlemen on the committee, and the late committee were re-elected *ad interim*.

The business having terminated with the usual compliment to the chairman, the meeting separated.

## GREAT WHEEL VOR UNITED MINES.

A numerous meeting of miners, merchants, adventurers, and others, interested in the progress and prosperity of the neighbourhood, was held on Tuesday, at the Assembly Room, Helston, to take into consideration the character and prospects of these mines.

NICHOLAS HARVEY, Esq. (of Hayle), in the chair.

The CHAIRMAN, having read the notice convening the meeting, said the value of the proposed undertaking was well known to most persons in the neighbourhood of Helston, and to the county generally; but there were some strangers present, and he should be happy to hear some of the experienced gentlemen present give any information which was in their power.

FARMER HILL, Esq. (of the firm of Grylls and Hill) said he was not aware of any thing that could have a greater effect on the interest and prosperity of the town, and locality, than the starting of such a mine as Wheel Vor, which must necessarily employ a large amount of capital, and that capital must be expended within an area of a very few miles. Wheel Vor was, he believed, one of the oldest tin mines in the county; and if tradition was right, between 1710 and 1730, the first steam-engine, of such it could be called, was erected there. He would call attention to the unfortunate circumstances in which this mine had been placed since 1830, because, on a careful consideration of them, they would be enabled to decide on its present condition and prospects, and to form an opinion why it ceased to work. He believed it had not been for these untoward circumstances, Wheel Vor never would have ceased to work.

In the year above-mentioned, a majority of the interest in the mine was in the hands of persons named Gundry, who in Dec., 1819, had become bankrupts. The purser (John Gundry) was then indebted to his co-adventurers 8000l., which still remained due. This so embarrassed the mine, that the works were on the point of stopping, when his late friend (Mr. Grylls) unfortunately purchased the mine, with the humane and fully honest intention of keeping the miners in employ. Owing to that circumstance, a fearful litigation ensued, which lasted from 1820 to 1845; still the mine contrived to make very large profits, although worked in anything but a workman-like manner. They worked the mine to a pit on the finest tin lode ever discovered in England, or the world; but never attempted to lay the side lodes, or to develop the other resources of the mine—the agents not being at liberty to do so. In 1845, the 19 shares which had been the subject of litigation, became vested in the assignee of Gundry, and so have remained to this hour. Of course, out of 49 shares into which the mine was divided, 19 was a large proportion, a few more giving a majority, and it seemed an extraordinary circumstance in the least of law's forms, that an assignee should be allowed to speculate in mines, keep open a bankruptcy for nearly 30 years, until he believed all parties dead, and to the great injury of the other adventurers and the entire neighbourhood. Fortunately, measures have at length been taken to obtain a majority of the shares, and with success, for 30 out of the 49 had been purchased; it was true the assignee still held the 19, but the Commissioners must see that what he was doing was illegal, was against all precedent, and every principle of our Bankruptcy Laws. He wished it to be distinctly understood that the litigation which had so seriously affected Wheel Vor would now be in the least affected by the new undertaking, which would be started under an entirely new set of grants from the lords, and have no connection whatever with the old adventurers.

Mr. CHASE, son of Capt. Chase, R.N., late lessee of the Duchy Tin Rights, explained how the company was proposed to be formed. The shares were to be 200,000, and the capital 200,000l. There was to be paid to persons buying up and for prospecting advances, 50,000l.—7000l. in cash, and the remaining 43,000l. in shares, which, however, would not pass from the control of the committee until dividends amounting to 10 per cent., or 20,000l., had been paid from the profits of the mine.

Captains Joseph Vivian, of North Boscawen; Michael W. Martyn, Mark Reed, W. Oats, Mr. Samuel Gross, late engineer to Old Wheel Vor; and Messrs. Dalton, Parry, and others, for many years acquainted with the property, showed that it was, without exception, one of the first tin mines in Cornwall; and if worked with spirit, economy, and the most improved machinery, would give enormous returns for many years to come. A resolution was then passed with acclamation, expressive of confidence in the undertaking, and a vote of thanks having been cordially passed to the chairman, the meeting broke up.

## ELECTRIC TELEGRAPH COMPANY OF IRELAND.

An extraordinary general meeting of proprietors was held on Monday, Dec. 29th, at the Guildhall Coffee-house, Gresham-street.

REAR ADMIRAL SIR W. H. DILLON, K.C.H., in the chair.

After the SECRETARY, Mr. Griffin, had read the advertisement convening the meeting, the CHAIRMAN stated that the objects for which they had met were for the purpose of taking into consideration the expediency of reviving the agreement entered into by the contractor, and recited in the deed of settlement, and also of applying to Parliament, in the present session, for an Act to incorporate the company, and for granting powers for the better enabling the company to effect its several objects, and to alter or amend the deed of settlement, as might be found expedient. It would be remembered that they first intended to apply for a charter, but since then they had thought it best to obtain an Act—the bill was prepared, and would be lodged on the 29th, ready to go before standing orders. The works were completed in Scotland, and the company intended immediately opening a line between Dumfries and Newton Stewart, boys having been taught the manipulation of the telegraph.

A SHAREHOLDER inquired what number of proxies there were in the hands of the secretary.—The SECRETARY replied 3500, and the proprietary present represented 16,000 shares.

It was then proposed by the Hon. GEO. MASSEY, and seconded by Mr. PARLAGRAVE—that the directors should have power to revive the agreement entered into with the contractor, and be empowered to alter the deed of settlement, and apply for an Act to incorporate the company, and to obtain further powers to effect the several objects of the company.

Mr. LOVELL inquired what had been the causes of the delay, and wished to know if their line had been a failure?

Mr. GILPIN (the contractor) said decidedly not; the cause of the delay had arisen from the state of the weather, in many places the trenches were saturated with water. Owing to the narrowness of the channel, they were liable to every change in the weather.

A letter from Capt. Hawes, the Admiralty commissioner, was read, stating that the cable was satisfactorily laid, but that it had to be buoyed at each end, and in favourably situated the connection could be made with the shore.

A SHAREHOLDER inquired if the company had sufficient funds to carry out their objects?

Mr. GILPIN replied they had means to carry out their operations in the first stages.—After a desultory conversation, the Hon. GEORGE MASSEY proposed a vote of thanks to the chairman for his able conduct in the chair. This was seconded by Mr. PARLAGRAVE, and unanimously carried, when the meeting separated.

## IMPROVED FACILITIES FOR LONDON TRAFFIC.—It is undoubtedly a generally admitted fact, by all observers on the subject, that the rapid increase in the traffic of the metropolis, both in wheel carriages and foot passengers, is becoming a very serious affair; and that, notwithstanding the vast improvements which have, within the last 30 or 40 years, been effected, and are still being carried out, extended means must be adopted to secure not only comfort, but even safety. Among other localities, the north bank of the Thames in particular offers great facilities for increasing our main lines of communication; an embankment on which was recommended by the Metropolitan Improvement Commissioners in 1841. It is with much pleasure we notice the issue of the prospectus of the London and Westminster Railway Company, the object being the construction of a railway, and a commodious roadway over, along the Middlesex side of the river, between London-bridge and Westminster-bridge. The railway will have three lines of rails at least; the roadway above will form a spacious and open thoroughfare, and a splendid public promenade at the level of the bridges, communicating with many of the streets leading to the river, where there would be stations. The length will be two miles two chains; and the whole will be supported on columns and wrought-iron girders, in such positions as at such levels as will allow of free access to the wharfs at all times of tide. Such extra means of communication would at once relieve the present thoroughfare of a great part of the enormous and overwhelming traffic which at present encumbers them; and on examining its elements there appears no doubt but that, with a charge of 3d., 2d., and 1d., for first, second, and third-class passengers respectively, the receipts will be sufficient to secure a steady and large dividend on the capital proposed, which is 600,000l., in 30,000 shares of 20l. each. As, however, sufficient consents to obviate the necessity of parliamentary notices may not at present be obtained, the bill for the railway only has been applied for in the present session; and in case that only a small number of the amount of capital required will be readily secured, another commercial speculation, that plans are in course of preparation for joining the line with all the railways whose termini are in London. The present carefully ascertained number of persons who pass daily between the termini is 150,000; and assuming that only one-sixth of these avail themselves of the advantages of this superior means of transit, an income will arise of 64,655l., from which, deducting the working expenses at 40 per cent., there will remain a net profit available for dividend of 13 per cent.—on 300,000l., the extreme capital required for the construction of the railway. The plan holds out the prospect of increased accommodation to the public, a vast improvement, and a noble feature on the river's bank, and a means of investment which is likely to produce profitable and permanent results.

WEST CORNWALL RAILWAY AND PENZANCE PIER.—On Sunday night last, during a heavy gale from the south, a wooden jetty, erected for the construction of the Penzance pier, was washed away. Its remains being driven on the Chyandour viaduct of the West Cornwall Railway, caused a considerable breach in it; whilst the force of the waves occasioned also some damage to the works near the station, and trifling injuries to those on the Penzance eastern green. The trains from the Marazion station, eastward, have, however, suffered no interruption; and within a week we hope they will be able to reach at least Chyandour. We regret to add that the loss from both these misfortunes will fall on the same contractor.

BOSTON AND MIDLAND COUNTIES RAILWAY AND DOCKS.—The directors of this company (proposing to connect Nottingham and the Midland districts with the port of Boston, by a railway running from Boston to, and forming a junction with, the Ambergate Railway, near Grantham) are, we understand, in a condition to proceed with their bill this session. The docks for the present are abandoned. The capital required has all been taken, and Messrs. Peto and Betts, the eminent contractors, have arranged with the company for the construction of the line, on terms highly favourable to the shareholders. The capital required for land, stations, and works, is but 250,000l., and the length of line is 32 miles, making the cost somewhat under 8000l. per mile.

THE TELEGRAPH ON THE PENINE ALPS.—The *Democratia* of Ticino states that, on the 19th instant, the first dispatches were received at Bellinzona by telegraph from Schyry and Lucerne by the St. Gothard. Messages may now be sent along by the Bernadino. The wires of the latter line, although covered with snow through a considerable portion of their extent, have continued to act with uninterrupted regularity.

PROGRESS OF TELEGRAPHIC COMMUNICATION.—Two companies propose to lay down lines between London, Liverpool, and Manchester, in addition to the lines already existing. The submarine cable across the Bay of Quinte, forming a part of the main line of telegraph between Quebec and Detroit, was laid down last month.

The ton-mile submarine cable, from Prince Edward Island to New Brunswick, the first link in the great telegraph line from the New Brunswick Telegraph Company, is now completed, and works well. The line across Prince Edward Island was to be finished by the 25th Dec. A force is now employed in stretching the wire across Newfoundland. The 150-mile line, from Newfoundland to Prince Edward Island, will be ready to lay down early in the spring, when the ice has melted.

ST. LAWRENCE CHANNEL.



## SOUTH AUSTRALIA—ITS STATE AND PROSPECTS.

[FROM OUR OWN CORRESPONDENT.]

ADELAIDE, AUG. 12.—Scarcely a couple of months have elapsed since I gave you my opinion that before Christmas we would probably have received one million sterling from our South Australian diggers at the Victoria gold fields. I am in a position to-day to give you another proof that in my reports from here I am always anxious to avoid anything approaching exaggeration, or open to refutation. The million is *un fait accompli* at the very time I am writing. The Assay Office receipts, as you will perceive below, exceed, up to this date, 900,000*l.*; and yesterday our fourth escort arrived safely, with 100,000*l.* more gold dust! I may as well begin by giving you the amount of gold dust deposited in the Assay Office since I last wrote.

Amount deposited up to 25d July	£747,740
Deposited on July 25, 8537 ozs.	30,308
" " 27, 6795 "	24,124
" " 30, 9146 "	35,470
August 3, 8330 "	19,637
" " 6, 4413 "	15,667
" " 10, 9184 "	32,603=£902,560
Add some few lots, the depositors of which were absent at the proper time	1,278

Total deposited up to 10th Aug. £903,838

Next I have to inform you, that this dear little colony of ours—this, by our neighbours, despised South Australia—has had the distinguished victory and triumph over the prejudice, ignorance, and something worse, displayed by both New South Wales and Victoria when our precious Bullion Act first came into operation, by seeing a strong party in both those colonies advocating the establishment in their respective commercial capitals, Sydney and Melbourne, of the identical assay office which has effected such marvellous results in this colony, and enabled South Australia to rise like a phoenix from the ashes of approaching ruin to a position third only in importance in the accumulation of gold to Sydney and Melbourne, the present great outlets of the El Dorado. A portion of our neighbours, I say, advocate now, might and main, the adoption of the principle, but as yet they are only talking about it, and for energetic action they are now, as ever they were, immeasurably behind South Australia. It is excessively amusing to watch the proceedings of the several legislatures there, to see how anxious they are to disguise their arguments that no one may suspect they have taken a leaf out of our book. In Sydney, it is given out by the leader of the House "that the measure proposed to be introduced there must not be mistaken for the Bullion Act passed by South Australia." In Melbourne, they go a step further, and honourable members in that house very complacently assure each other, and the public out of doors, "that neither the colony nor the Legislature of South Australia are a fit model for them to imitate." Of course not! But disguise it as they will, the principle is the same—viz., assaying the gold, and making the ingots a legal tender, and the basis of a paper issue! But as the introduction of such a measure in those colonies would give a fatal blow to all the tribe of speculators who are now fattening on the low price at which the poor fellows who produce the gold are obliged to sell it, and as you can easily imagine that the said speculators form by this time a very numerous and powerful body, the whole mercantile and banking interest in those two cities being engaged chin deep in the profitable business, the greatest opposition is being raised to it, and there was little chance of its being carried, when all of a sudden the arrival of the Peninsular and Oriental Steam Navigation Company's steam-ship *Chusan*, at Melbourne, with dates to 14th May, brings the intimation that her Majesty's Government has the most favourable disposition immediately to establish a royal mint in one or both of those places. The diggers, now generally called the "new aristocracy," have, therefore, the prospect of very soon being able to realise the full value of the article they are producing in such amazing quantities. But even here, again, we are beforehand with them all, seeing that the gold from our own men is arriving now in Adelaide in a steady and increasing stream, at the rate of from 50,000*l.* to 60,000*l.* sterling per week, or 3,000,000*l.* sterling per annum! Seeing, also, the utter physical inability of our local banks to procure and sign for circulation a sufficiency of notes equal to the demand, our active community have for some weeks past been agitating the necessity of establishing a mint here, and it is now certain what I merely foreshadowed in my last letter, that the establishment of a mint in Adelaide, distinct and independent of any or either that may be established in Sydney or Melbourne, will not be postponed beyond the period which may be actually required to get together the necessary establishment and machinery. Our Legislative Council meets in about a fortnight, and you may depend upon it that the members will not leave the walls of the House when once they get inside it, before they have taken such steps, and passed such measures, as may be necessary to secure to this colony a full measure of the advantage to be derived from our happy proximity to the gold mines, and the well ascertained attachment the thousands of South Australians now at the diggings feel for this colony. With the overland escort, now well established and most efficiently conducted, between Adelaide and Mount Alexander—with our own commissioner permanently stationed at the gold fields to receive into his custody the gold from the South Australian diggers as fast as they raise it, to transmit by the escorts—with the navigation of the River Murray (our own noble river) on the point of being opened by steam, which will enable us to send provisions, &c., to within 40 miles of the diggings by water carriage—I say, with all these advantages already assured of, is it likely that we will sit down quietly and see the neighbouring colonies derive all the benefit from the labour of our sons, which would be the case if we did not continue to offer them equal and greater advantages here by coining the gold for them, and thus insuring its investment in this colony? Whatever inconvenience some of our industrial pursuits may have to undergo from the great abstraction of labour which has taken place, and will continue to fluctuate backwards and forwards for some time to come, we have nothing to fear for the future, as long as we enable them to realise their earnings here, where all their local attachments we now know bind them to return. But if gold were only to be coined in Melbourne, there would be too much fear that, once having got the sovereigns on the spot, many might be induced to leave us altogether. A mint we, therefore, must have, and what is more, looking to antecedents, and the determination with which South Australia has overcome the most formidable difficulties that have in our short history threatened to crush our nascent prosperity, from the days when we knocked on the head the royalty tax on minerals to the day when, in the early part of this year, we overcame the reluctant scruples of our Government and passed the Bullion Act, I may add, a *mint we will have*. Mr. Babbage, our very efficient superintendent of the Assay Office, has this week given in to the Government his estimate of the probable cost of establishing a mint here, from which official document it appears that he will undertake to issue 6000 coined pieces daily, at a total yearly expense (including the present expense of the Assay Office) of 18,000*l.*—or, say 20,000*l.* The Government charge upon gold dust passed through the Assay Office is 1 per cent., and produced in the month of July 2400*l.*, so that the charges of the additional establishment will probably enable the Government to carry out the plan without any further deduction.

The immediate consequence of the certainty which now exists that the enormous quantity of refined and assayed gold held by the local banks will, at an early period, be turned into coin here, and thus relieve the banks of the necessity to import sovereigns from England and ship ingots home, has not alone removed from the two banks that have worked our Bullion Act from all anxiety respecting their extended circulation of notes, but assures them, what they richly deserve, of a very large profit. The gold which they have taken at 3*l.* 11*s.* (which price our dear neighbours at the time declared to be stark staring madness to give), they will now be able to get coined here, and re-issue at 3*l.* 17*s.* 10*d.* an oz. *l.* The South Australian Bank, which holds by far the largest portion of the gold, it is estimated will, before the expiration of the Bullion Act, and the commencement of the coining (when, of course, their profit from that source will cease) clear 100,000*l.* on the gold they will at that date have in their vaults—equal to half the entire present paid-up capital of the corporation; and the fortunate shareholders of this bank, who, when they first heard of the difficulties which fell upon this colony, were no doubt quaking in their shoes, and wishing themselves well out of them, will, like magic (for these astounding occurrences now taking place in Australia are magic of the purest water) awake to the happy consciousness of their shares being worth double what they were at the commencement of this year. Now, mark the change which has come over the dreams of the Bank of Australasia, which has hitherto doggedly set its face against the Bullion Act, and earned for itself undying notoriety in consequence; now, that establishment has suddenly found out that it is after all not such a losing game to issue 1*l.* in paper against 1*l.* sterling of refined gold, worth 3*l.* 17*s.* 10*d.* in coin, but only valued to the banks at 3*l.* 11*s.* an ounce. The man-

ger's face is now decked with the blandest smiles whenever he meets a digger; he has actually discovered that he can allow cheques on the other two banks to be paid into his bank without fear that the Bank of South Australia and the Union Bank will not be able to give value for them, which he thought once, as he refused to take them, and he is as anxious now to carry out all the provisions of the Bullion Act as he showed temerity in repudiating it, after his most respectable and scandalously ill-used predecessor in the management had agreed to co-operate with the other two banks to carry it out. When the real *fact* of the case are once fairly before the proprietary of the Bank of Australasia at home, when the losses this bank has sustained in consequence, the amount of custom which has slipped through their hands and gone over to the other two establishments, the scorn felt for that bank by our public, and (to which shareholders are peculiarly sensitive) the amount of profit the bank might have made but has not made, is once fairly made patent to the London shareholders, who have it in their power to ferret out all these things if they like, they must be strange people indeed if they do not tardily but surely come to the conclusion that when they superseded the respected, experienced, and judicious Mr. MacDermott in the management of that branch in this colony, they committed an act cruel to that gentleman, and one productive of certain and great present losses to the proprietary, as well as loss of prestige to the branch here, which, as far as future profits is concerned, is sure to be attended by a great diminution compared with what that profit would have been had the confidence of the public not been rudely shaken by the occurrences of the past six months. Notes of the Bank of Australasia, which had almost entirely disappeared from circulation, are now being again freely issued, and the customary exchanges between the three banks re-established on the former usual footing.

The *Charlotte Jane*, which sailed lately from here to London, took the richest freight which ever left our shores—40,000*l.* worth of copper, and 48,300 ozs. of gold; total value of both together about 230,000*l.* Capt. Hitchens, who was sent out by the Australian Mining Company to inspect the Tungillo Mines, returned home in her; so you will probably soon hear his official report of that property. I know pretty well what it will be, but I shall leave it to speak for itself. Mr. Matthew Forster, the present manager here, has taken a mineral lease from Government of 80 acres, at Mount Middleback, far up in Spencer's Gulf, at the yearly rent of 40*l.*; the specimens brought in from there are very promising—some (the grey sulphuret) having turned out on assay 75 per cent. The Patent Copper Company's furnaces continue in full work; they are apparently under no apprehensions for want of labour. The Burra Burra is also going on steadily; and although they feel the want of labour at grass, to clean up the low produce stuff, still the underground operations do not suffer for want of hands. The monster engine is nearly ready to be set to work; probably about the 1st Sept. it will commence forking out the water, and from the bottom of the new sump, in the 50 ft. level, the most magnificent specimens from a lode of red oxide and ruby copper (all but pure copper) are now being shown at the office. The steady old miners appreciate the benefit of plenty of profitable work and comfortable homes; and although many, no doubt, have tried the gold diggings, and may try them again, they leave their families behind, and are sure to come back again. They have at present some 180 underground men at work.

Your old acquaintance, Mr. Evan Hopkins, is reported in the papers to have purchased the goodwill (lease) of a squatters' run in Victoria, for the sum of 10,000*l.*; 5000*l.* cash and 5000*l.* draft on England, but without the livestock, the former proprietor having the option of leasing the run again at the annual rent of 500*l.* per annum. I hear from parties returned from there that he intends erecting his machinery on this run, and to cart the soil from Mount Alexander to it, some few miles off. You will understand that his buying this run gives him no more right to the fee simple of the land, or to any gold he may find on it, than you have.

The following is the quantity of gold already shipped from here to England:

Albatross	Ozs.	£42,000
Sophia Moffatt	16,290	51,522
Sibella	12,017	42,000
Water Lilly	200	700
Charlotte Jane	48,179	160,123=£303,345

A very large proportion of this is in gold dust, and has not passed through the Assay Office, so that the real amount already far exceeds 1,000,000*l.*, as our share of the spoils from the gold-fields. I add a few other interesting statistics.

Exports of produce of the colony for six months ending—

	25th June, 1851.	25th June, 1852.
Wool	£108,975	£109,382
Copper	130,348	114,035
Regulus	4,650	11,270
Copper ore	80,294	142,286
Lead ore	1,072	
Grain and flour	27,118	66,836
Farm produce		6,582
Tallow	3,619	2,975
Animals	98	2,310
Sundries	2,000	10,693
Total	£358,139	£464,870

Imports re-exported during the same period—1851, 20,120*l.*; 1852, 265,604*l.* Custom-house revenue for the quarter ending 25th June, 1851, 22,299*l.*; 1852, 19,342*l.*: showing only a small falling off of 2957*l.*

We are now in daily expectation of the arrival of the *Australian*, the first of the mail steamers. If she left on the 3d of June she will at this date have exceeded the period (67 days) fixed by our Legislature, to entitle her to the bonus of 400*l.*, if she landed her mail here in that time. The immense rush which is now taking place to Melbourne will, no doubt, in the first instance, indispose the steam companies to allow their steamers to call here on their way to Melbourne, as was shown by the *Chusan* going on without stopping. We must bear with this disappointment, in the first instance, but after the present altered condition of South Australia is known in England, where many probably think us entirely ruined, this will no doubt be altered, and the steam companies will find our Legislature will deal very liberally with them, and award to their steamers such a bonus as may induce them to give us our share in the advantages of the new era opened to us by this steam communication.

It is intended to go on at once with the works of the railroad which is to connect the city of Adelaide with the port (seven miles). A portion is already substantially fenced in. A shallow-draughted steamer is now being built in Sydney, for the navigation of the River Murray. Our Legislature gave Captain Cadell the very handsome bonus of 2500*l.* on her reaching the Darling, and she is to enter the river by the sea-mouth of the Murray, and be ready for her first trip in November next.

ADELAIDE, SEPT. 14.—The first intelligence I have to give you to-day is the realised discovery, on the 21st August, of an undoubted gold-field in this colony, in the stringy bark ranges, 23 miles from Adelaide. The cry of "wolf" has been so often raised here, that every one was incredulous until the official report of the Colonial Secretary appeared on the 24th August, which placed it beyond doubt. The spot is near Echunga, where Mr. Jacob Hagen possesses 3000 acres of land, as well as the South Australian Company, and other proprietors now in England other portions. The diggings, therefore, go by the name of Echunga Diggings. Two persons (Mr. Chapman and Mr. Hampton) conjointly claimed the reward voted last year by the council, of 1000*l.*; they are returned diggers, and were, in common with every one else who has visited the Victoria diggings, struck with the similarity of the country between the two places. The excitement in Adelaide, after the news was first promulgated, beggars all description; hundreds upon hundreds went out to see it—cradles rose from 30*s.* to 5*l.*, and were not to be had a couple of days after even at that price, and tin dishes, picks, and spades the same; the most unconscionable prices were asked by everybody for everything. The people were decidedly mad, for the time being. In two or three days, however, the rain came down in torrents, which quickly cooled the ardour of most of the diggers, as they were totally unprovided with the usual outfit, and numbers returned to town. Then, again, although you could not take up a spadeful of earth and wash it without finding some portion of gold in it, the men soon became discontented, because they did not immediately find lumps as big as their heads. This is also just about the time when most of our adult male population had made all their preparations for a second visit to the Mount Alexander gold-fields; and as a great number of them had been very successful at the latter place, they would not forgo their chance of again doing well at a place where gold had been found in large lumps and quantities, for the sake of spending the present fine season at the Echunga diggings, where the gold, as far as yet known, is more minutely distributed. Our gold-fields are, therefore, at the date I am writing, at a great discount with the people here; and the extreme excitement has been followed by as extreme a disappointment. I do not intend, therefore, to-day to enter into any full details on this subject, as

I have a decided objection, at all times, to give statements which might afterwards turn out to have been too sanguine or exaggerated.

It is enough to record these facts—1. That gold of precisely similar a description to that found at Mount Alexander and other places has been found near Echunga, in the surface soil and gravel, minutely though widely distributed.—2. That the kind of country in which this discovery has been made (as yet only in this locality) extends in length some 60 miles, by from 10 to 20 miles in breadth.—3. That the gold, although minutely distributed, is not confined to dust, but that nuggets, varying in size from 1 dw. to 1 oz. in weight, have in many instances been found.—And 4. That the official assay of the gold by the Government assayer, Mr. Babbage, fixed the purity of the gold at 23 i-16 carats of gold, 2 of a carat of silver, and a little iron, thus proving it to be of first-rate quality, having no trace of copper in it, which the Mount Alexander gold has. Whether other places will now be found in which the gold is deposited in large and remunerative quantities is a problem yet to be solved. I have no doubt that, sooner or later, it will be so found, and have recorded my opinion in my former communications to you; and although I cannot report to you, with anything like truth, that the aggregate quantity of gold found at Echunga by all parties, of which I have been able to collect credible data, exceeds 150 ozs. up to this date, still this quantity I can vouch for, and if it proves nothing else it proves this, that we have great reason to hope this is only the first link of grander discoveries to be hereafter made, when our people, who have been spoiled by the riches of Mount Alexander and Bendigo, shall give themselves the trouble to institute a more systematic and vigorous search for it throughout the stringy bark ranges and gullies. In all these discoveries, the tendency of parties writing to England about them is inclined to exaggeration, and you will no doubt appreciate the moderation with which I announce this important discovery to you. You may rest assured that I will keep your readers well informed, the moment authentic discoveries of a more important nature occur. One peculiarity this gold possesses different from the Victoria gold is, many of the particles are fine threads and thin shavings as it were, from the smallest size to an inch and an inch and a half in length.

The winter being now past, and the most lovely spring weather prevailing, our male population is now again on the move for Mount Alexander. In a couple of months time, the greatest part of what formerly was our working population will have left for Melbourne, and although all fears of their stopping there altogether are now allayed, nevertheless, as a working class of people, they are spoiled for the future; those who have done well (and their name is legion) will, when they return, be employers of labour themselves; those who have not done well will come back discontented, and consequently reluctant to settle down again to common day work at moderate wages. The terrible revolution this has created in all our industrial pursuits is beyond belief to you in England, who are accustomed to get easily any species of labour you may require. The shearing season has commenced this week, and it is extremely doubtful whether one-fourth of our sheep will be shorn, and if shorn whether men can be found to drive the team bringing the wool to the port for shipment. The crops are looking magnificent, but whether there will be any one to gather them in at Christmas is equally uncertain. This is a dreadful state of things; the most exorbitant prices are asked for any article of clothing or of daily domestic use which require hand labour; and if this state of things is to continue during 1853 a great many people will be ruined. Tons of gold may accumulate here, but that will not save those whose wool is to rot on the sheeps' backs, and whose corn may become the prey of the wild fowl, for want of hands to collect it. And future historians who record this astonishing state of things as obtaining in one portion of the British empire, will also record that in Great Britain itself thousands are in distress, who would be invaluable here, but are unable to come. Verily, those in power have much to answer for! It appears to me that the first duty of the Legislature should be to provide for the wants of those who cannot provide for themselves; and would it not be much better for Parliament at once to consider and adopt some grand and comprehensive system of emigration to these colonies, by which the perpetual drain on the English Exchequer for the support of those who cannot support themselves will be done away with, and a new and large class of consumers of British manufactures created, which will give additional means of support to those who remain in England.

Labour, labour, labour, is the constant cry out here—is the only thing wanted, to make this one of the most blessed countries which a kind Providence has created for the use of mankind. One thinks of it by day—aye, one dreams of it by night.

The next great event is the arrival of the first mail steamer, the *Australian*, on the 29th Aug. As far as the actual steaming and sailing went, her voyage was not a bad one; but owing to the want of a proper supply of coals at the different coaling stations, her detention and deviation from the proper course (by calling at St. Helena) made her about 14 days behind her proper time. This will, no doubt, soon be rectified, and the arrival of the different mails better timed. Whilst the passengers speak in the highest terms of praise of the commander and officers, they were nevertheless exposed to discomforts, owing in a great measure to the hurried nature of her departure from England; the crew were in a state of mutiny on their arrival here, and how they afterwards got on I know not. She is expected back here on the 25th inst., and I shall in future limit my communications to writing by the steamers. The *Australian* will take a very large amount of gold to England from the different places she calls at.

The Peninsular and Oriental Steam Navigation Company showed great wisdom in sending the *Chusan* out some months before the regular contract service, *via* Singapore, commences; they have thus time to make all their arrangements at the different ports, and there can be no doubt that the contract will be carried out by this princely company with the utmost regularity and dispatch. A magnificent ball was given to the officers of the ship at Sydney, and if time allowed, the same compliment, on a more humble scale, would, no doubt, have been paid them here. The *Chusan* arrived here from Sydney and Melbourne on the 11th inst., in the evening. She came right into the port, and anchored at the north arm, thus at once and for ever proving the capability of our port to receive these magnificent ships into her safe water. A new, and I trust bright era, is now opened to us, by being thus brought into close proximity with England by means of steam, and many of the difficulties we have so many years had to contend against will thereby be cleared away.

The Legislative Council met in third Session on the 1st inst. The Governor, in his opening speech, was candid enough to admit, in graceful terms, the thorough success of the Bullion Act, which, when first mooted (last January) received his strong opposition; the Governor having yielded his own convictions to the united and unanimous representations of the most intelligent amongst our enlightened community, on this point, added to the undoubted benefits this province has reaped from the working of that measure, has produced a very friendly feeling on the part of the Legislative Council, as well as the community at large, towards his Excellency, and he is in a fair way of becoming one of the most popular governors South Australia has had. The propriety of having a mint of our own, seeing the large quantity of gold coming to Adelaide, and the reasonable probability of our soon having profitable gold-fields here likewise, will at once occupy the attention of the Legislature; but as some time must necessarily elapse before an address to the Queen on the subject can be sent home, and the arrangements made for the regular mint being established, it will be necessary for the Council to take the Bullion Act into consideration, with a view of introducing such modifications or extensions as may on inquiry be found to be necessary for the protection of those banks which have loyally worked out that measure, and incurred considerable responsibility, by the large issue of notes, to meet the great influx of ingot gold. What the precise nature of this alteration will be is not yet determined, but it is very probable that, awaiting the establishment of a mint, gold tokens of 22 carat gold, will meanwhile be issued by the Assay Office, at such price as may be determined upon by the Council; the price will, of course, have to be more than that now paid for ingot gold by the banks, which is 3*l.* 11*s.*; but considerable difference of opinion prevails on this point also. It is a difficult question to deal with, and I shall let you know shortly what may have been determined upon. It was expected that the directors of the Peninsular and Oriental Steam Navigation Company would have made arrangements by opening a large policy of insurance on the *Chusan*, so that this steamer might have taken whatever gold offered for transmission by that company through Egypt to London; but there appears to be some hitch about it—at all events, it is understood to-day that the Bank of South Australia, which has 200,000*l.* worth of ingot gold ready to be transmitted to London, do not consider they will be covered by the insurance on this vessel, so that the shipment will be made by the steamer *Australian* instead, at the end of this month; this is a pity, as opportunities by sailing vessels are very uncertain, owing to the next to impossibility of ships getting crews; and the bank is, no doubt, anxious to ship the gold, in order to reap that profit



on which they so well deserve; but on the other hand, the directors of the Peninsular and Oriental Company could not force the large amount of gold that would offer. This will be a very profitable voyage for the *Chusan*, as she is understood to have made 2200*l.* for passage money alone from Sydney to Melbourne, and also 2200*l.* from Melbourne to Adelaide, every berth fore and aft being engaged at full prices—6*l.* 6*s.* and 10*l.* 10*s.*

The following are the several quantities of gold deposited in our Assay Office since my last:—

Amount deposited up to 13th August	£303,838
Deposited 13th August, 5237 ounces	18,665
" 17th " 9458 "	33,682
" 20th " 3141 "	18,250
" 24th " 3545 "	12,586
" 27th " 3468 "	19,413
" 1st Sept. 1305 "	4,607
" 3d " 2874 "	10,205
" 7th " 1747 "	6,302
" 10th " 2843 "	10,094

Total number of depositors, 4147. £1,037,542

We have heard of the South Australian gold escort having left Mount Alexander on the 21st August, for Adelaide, with 45,000 ozs. of gold, so that they may be expected to arrive here during this week; ships are also arriving almost daily from Melbourne, bringing back many people and much gold; so that altogether we may be said to be making rapid strides into the second million, which there is ground for believing will have arrived here before the year is out.

Our Assay Office is now in a most efficient working order. Liberal salaries have secured a sufficient number of the most talented men that could be obtained; and a very little addition to the present working staff will be sufficient to enable Mr. Babbage to issue gold tokens for circulation. The total cost of this establishment from 10th February to 24th August amounts to 4219*l.* the receipts (being a charge of 1 per cent. on amount deposited) 9767*l.*, leaving thus a large surplus for further improvements and additions in that department, if they should be found necessary.

The Burra Burra Company have declared their seventeenth dividend on the 1st of September, of 5*d.* per share; this bears out what I told you a short time ago; that the dividends would certainly not exceed 5*d.* per share per quarter. The monster engine will be set going on the 16th inst. I believe I have already informed you that the lode in the 50 fm. level had been cut in undiminished size and richness. By the *Australian* I shall probably be able to inform you what number of men are likely to remain at the Burra Burra during the spring and next summer.

The council, last week, passed an address to the Governor, requesting that he will obtain the services of either Mr. Hargraves or the Rev. Mr. Clarke, the eminent geologist, from Sydney, in order to examine the extent and prospects of our gold-bearing country. An authentic account, made up in Melbourne, of the amount of gold raised from October last year to the date of the sailing of the *Chusan*, in the province of Victoria, gives a grand total of 2,532,422 ozs., or 105 tons 10 cwt. 35 lbs. 2 ozs., valued at 8,863,477*l.*

A great many outrages are being committed in Melbourne and at the diggings; at the latter place a regular stand-up fight has taken place, between a mob of 150 Irishmen and an equal number of English; one man was shot dead on the spot, and many were very severely wounded. The arrival of an American ship from New York, with Yankee emigrants, the first ship of several coming, is a new feature also. Land was selling in the business street of Melbourne (Elizabeth-street, a corner) at 270*l.* per foot; this appears almost incredible, but I have it from very good authority.

The Patent Copper Company, at Kooragang, are temporarily at stand still; they are acting wisely, in my opinion, to give their men an opportunity of visiting Mount Alexander; were they prevented from going, they would only be discontented, troublesome, and consequently useless; in a short time they will be glad enough to return to their regular work, comfortable homes, and good wages. At Kapunda the water is kept well in fork by the two pumping machines; and 500 men could be well employed, were they to be had; but there is nothing for it but patience. Twelve months, I believe, will see a great change with regard to the supply of labour. Mr. Philcox and Mr. George Morphet, two of the gentlemen who got up the new South Australian Mining Company (Strathalbyn Mine) in England, of which I wrote in one of my last letters, arrived in the *Australian*.

#### THE GOLD FIELDS OF VICTORIA.

The total amount of the precious metal brought into Melbourne by the several escorts, and by private hand, up to the end of August, we showed to be 1,771,974 ozs. Since then the quantities brought in have been as under:—

GOVERNMENT ESCORT.		Ounces
Sept. 3—From Ballarat	37,956	4,627
" 7—Mount Alexander	4,897	37,956
" 10—Ballarat	4,661	4,897
" 17—Ballarat	47,061	4,661
" 25—Mount Alexander	29,625	47,061
" 25—Ballarat, unknown	—	29,625
PRIVATE ESCORT.		
Sept. 3—From Mount Alexander	33,805	33,805
" 5—ditto	31,755	33,805
" 14—ditto	47,650	31,755
" 20—ditto	46,922	47,650
" 26—ditto	44,427	46,922
TOTALS.		44,427=197,959
By Government escort	128,850	
By private escort	197,959	
Conveyed to Adelaide by South Australian escort on the 16th inst.	39,404	

Total quantity brought down by escorts ..... Ounces 366,193

We have here tolerably correct data to determine the average weekly yield of the Victoria diggings. In an address to her Majesty, drawn up by the Legislative Council some days ago, it is stated that "the present weekly yield of gold, taking the last three months as a criterion, may be estimated at 50,000 ounces, which, at 7*l.* 10*s.* per oz., gives a gross annual sum of 14,500,000*l.* sterling." This estimate is fully substantiated by the figures given in our previous article, and more than confirmed by the statistics given above. For we find that in the first four weeks of the present month close upon 370,000 ounces have been conveyed from the diggings by escort, in addition to the unknown quantities brought away by private persons, and still remaining in the hands of the diggers. Perhaps an average yield of 120,000 ozs. weekly would not be an exaggerated estimate. At all events, it is perfectly certain that the weekly yield is constantly increasing; but, on the other hand, it must be stated that the present is the most favourable period of the year for gold digging, and that the number of diggers is constantly increasing.

In our previous summary we estimated the total yield of our gold-fields, from their commencement to end of Aug., at 2,532,422 ozs., to which, adding the amount since brought in, we have a present total of 2,898,615 ozs., which, at 3*l.* 10*s.* per oz., is equal to 10,145,152*l.* sterling; but this amount, we may again state, we believe to be much below the actual value of the gold produced in Victoria to the present date.

We have said that the number of diggers is increasing. Our previous estimate gave the number at 70,000, and it is likely that upwards of 80,000 are at this moment on the ground. Taking the average weekly yield given by the Legislative Council, we find that the average yield per man a week is exactly 1 oz. This result is at least confirmed by the general statements of the diggers themselves, it being universally admitted that any persevering digger can easily secure 1 oz. per week—a striking contrast with the wages of the Lanark handloom weaver, and the pittance doled out grudgingly to the Dorsetshire labourer, or the famished Irish peasant.

That the quantity of gold produced rises or falls in proportion to the number of diggers is now a demonstrated fact; and two important inferences are deducible from it. First, that the capabilities of our gold fields are almost without limit, since the more they are worked the richer they appear; and, second, that they offer remunerative employment to any number of men who choose to labour in them with energy and perseverance. These are the plain and practical facts on which English workmen can find a safe judgement as to the wisdom of trying their fortune at the diggings. We lay no stress on the chances of the exciting game of gold-seeking—we say nothing of the marvellous prizes won by some favorites of fortune, because that would be to run the risk of misleading and deluding the honest worker. If the certain gain offered by the diggings is not sufficient to induce a man to give them a trial, he is very foolish if he allows himself to be lured to them by the comparatively few chance instances of extraordinary success.

But it is not only far to state that there are such instances, and many have come to light within the last few weeks. The most remarkable is the finding of a splendid mass of pure solid gold, weighing 28 lbs. 4 ozs. This superb mass has been purchased by the Executive for 1650*l.*, for presentation to her Majesty, and is forwarded by the *Australian* steamer. These are solitary instances, however, and offer no standard of general success.

The experience of the past month has not alone tended to confirm the fact, that our gold fields are not yet beginning to exhibit the slightest symptoms of exhaustion, but have given fresh evidence of their indefinite extent. In two instances it has been found that spots which had been tried and abandoned as comparatively unproductive have proved, upon more minute investigation, to be richly remunerative. Other localities, hitherto untried, are spoken of confidently as abounding in gold. It is not necessary, however, to supplement the substantial proofs of the enormous richness of the province by mere reports of additional gold fields.

But, by the way of showing the extent and present aspect of the various gold fields, we may quote the latest reports from several different localities distant very many miles from each other. An experienced man, writing from Mount Alexander on the 17th inst., says:—"Some of the gold finds around this creek have been numerous and heavy. On Tuesday last one man picked out a noble solid piece, about 9 lbs. of pure gold, besides a great quantity of smaller nuggets around it, in all worth 800*l.* or 1000*l.* at one swoop. Another party, on coming down to the pipe-clay, found between 9 and 10 lbs. of gold resting on the rock at an angle of about 45°, and lying beautifully in a sort of vein on the pipe-clay. . . . Many men with their families have evidently come up here now to settle permanently, for to exhaust the gold at the Mount will take many years yet—1880 won't see it out."

Another, dating his letter from Eureka, near the first Ballarat goldfield, writes:—

"During last week a party at Little Bendigo obtained in a day 208 ozs., which every day since has increased as the party get further into the dip the rock. This party certainly deserved success, for they sank the hole where no other party was sinking; and, having been some months unfortunate, were determined, in the event of that hole proving a failure, to bid farewell to the diggings. A great many instances of equally good luck are daily coming to my knowledge. Everything is now wearing a brighter aspect. It may be safely asserted that Eureka, if not now, will soon become the 'El Dorado' of Victoria."

A gentleman at Dasy-hill, at the Pyrenes, 30 or 40 miles further west, says:—"On the 10th Sept., since my last communication, the Dasy-hill diggings have advanced in public favour, and on good grounds, as, with an increased number of diggers, the average finds have, I believe, been larger than previously was the case. The diggers have almost entirely confined their operations to surface washing, having been prevented from sinking by the wet; the surface soil is universally auriferous, and in spots extremely rich, a party having in one afternoon procured 42 ozs. of gold; this, of course, is an instance of unusual good fortune, but I believe that I am correct in stating the average return from the surface washing at 1 oz. per day per man. A nugget weighing 13 ozs. was picked up on the surface on Saturday last."

And a letter dated Reid's Creek, at the Oren's River, quite in another direction, being 180 miles north-east of Melbourne, contains the following passage:—"A person on the ground reports that a party of four got 17½ ozs. of gold in one day, and that he and his companions were making an average of 6 ozs. daily between them. The worst success ascertained was 2 ozs. and upwards per man per day. This person observes that he never saw at either the Mount Alexander or the Turon diggings the gold run so regular, and that where the diggers are now at work there is room for 4000 or 5000 people. The nuggets they have picked up weigh, in many instances, from ½ to 6 ounces. There are now about 160 people on the ground. The distance from these diggings from Melbourne is 180 miles on the Sydney road, and 15 miles from the township of Wangaratta."

The most cautious reader will now be able to judge for himself, from the evidence we have laid before him, as to the actual value of the gold fields now being worked, and their possible capabilities; but we think that it is an unwarrantable assumption to claim for the colony of Victoria the honour of being the richest gold field in the world.—From the *Melbourne Argus* of Sept. 24.

#### Original Correspondence.

##### NORTHAMPTONSHIRE IRON ORE.

SIR,—Your correspondent, "W. W." (of Winchester), informs us that "an assayer" has been residing for many months near and in Northampton, to form a correct opinion of the new ironstone, and that he has actually accomplished it. It is a surprising feat, considering the shortness of the time which has crowned his efforts with success. I beg "W. W." will present my compliments to the "first-rate assayer," and tell him he is a blockhead, or a very deep philosopher, or something else. It is no ordinary capacity that has discovered the identity of quartz and carbonate of lime of the primitive ironstone of Malabar, and the adventitious ironstone of our colliery group. I fear the jobbers are preparing to stick some one in the mud of the New. If iron is to be made in Northamptonshire, let it by all means be done on its own merits, without the false pretences of a first-rate steel company, "declared by the assayer." It is difficult to imagine who they can expect to deceive, were it not too notorious that the more ignorant the scheme the more easy the capitalist. The letter is a libel, indeed, upon "Cornish gentlemen."—DAVID MURPHY, Dec. 27.

##### THE COPPER TRADE.

SIR,—Let us consider the case of the copper miners, taking the evidence (clearly a very partial one to the smelters) of Mr. Hill. Is it not monstrous that such immense sums of money should be annually expended in mining pursuits, with the certainty that the greater part must be fruitlessly spent, and that something in the shape of a *manœuvre*—one huge deposit of ore at a comparatively shallow depth—be discovered, all our endeavours are as naught? and yet it is to be wondered at, when it is admitted that the price of copper has no reference to the cost of its production, and is not regulated by the comparative amount of labour and capital required to produce it? I am not aware of any other article of commerce under the sun of which this can be said, nor of any other trade, except that in copper, in which the rates of profit are not regulated, and which do not vary with the value of money. Here, however, the value of money falls in Lombard-street, the price of copper rises in Thames-street, and the standard of copper ore falls in Cornwall, and simultaneously so. Can there be a greater anomaly than that the prices of all commodities should be influenced by the value of money except copper? I allude to its permanent fixed value. Apart from the natural fluctuations occasioned by supply and demand, which can or should have only a temporary effect, I calculate the natural price of copper at 10½*d.* per lb., or 98*d.* per ton, including a fair profit to the smelter for the use of his capital; but they have been giving us 9*d.* per lb., or 84*d.* per ton, exclusive of an usurious rate of charge for profit on capital. The present price of copper is too high, and cannot be maintained, the causes of which I have already explained; but instead of recovering its true value it will, under the influence of the trade, unless combated by a movement among the miners themselves, recede to a monopoly price. Let the miners, then, associate and form a committee; let it be strictly a miners' committee, and I pledge myself to lay before them for their consideration, and I trust, for their adoption, certain measures which shall improve their relative position, and by a simple operation keep a wholesome check on the ore market, and exercise a fair legitimate control over the smelters.—A MINER: Redruth, Dec. 27.

P.S.—At the last meeting of the Geological Society at Penzance, a friend brought to my notice a petty grievance—and I call it so only as compared with others of greater magnitude—viz., the fees on sampling and weighing off ores paid to the copper company's agents; they are not only excessive, but are justifiable on no ground whatever, and should be swept away as like unworthy of both smelters and miners. They are reluctantly paid by the miners, and should not be allowed to be received by the servants of any copper company possessing a proper feeling of independence.

##### THE KNOCKMAHON MINES, IRELAND.

SIR,—The paragraph in your Journal of the 25th Dec., relative to the falling off in the produce of copper ore from the Irish mines, and particularly Knockmahon, may be taken as a warning to those who are engaged in the same. The position of these mines, it may be well to say that they stand upon the sea coast, and have no harbour for shipping; and the open bay, during the last three months, has been so boisterous, as to prevent our shipping the usual quantity of ore. However, I am glad to state that we have now on hand about 600 tons, which we shall be regularly shipping when the weather proves favourable. You will oblige by giving this insertion in your next Journal, in order to prevent any unfavourable impression.

Dec. 28. WILLIAM PAUL.

##### MINING NEAR TAVISTOCK.

SIR,—I observed in your Journal of Saturday last a paragraph, headed "Mining near Tavistock," wherein the writer states of having visited that district, the little mines, &c., and goes on to pass his opinion that, ere long, it will become a "splendid locality," and that Wheal Franco is included; but he also states that she is "wretchedly managed," which I am very sorry to hear, both for the sake of the lord and the adventurers. Therefore, knowing the party and Capt. Lane, the agent, his abilities and knowledge of the mine, I am very hard to believe that there has been any mismanagement to lead forth such remarks, or, on his character as agent, or on the company, which are highly respectable, some of whom I know both at Tavistock and Plymouth; and was employed by them above 12 months since to inspect the said mine, and to see that the workings were carried out agreeably as before stipulated with the lord on additional ground being granted, and a reduction of dues being submitted to. I only agreed with the adventurers to inspect three times in one year; and during that time I considered it my duty to see that what was stipulated should be carried out, which was done and doing when I left it in a very satisfactory manner for all parties interested. The eastern ends were driven home to a large cross-course; and it is of course agreed that the shaft should be driven through the cross-course about the same angle as the lode ran, and then to drive south to outcrop; we are, east side, presuming it was a considerable distance in that direction—the lode having been found south by a similar cross-course further west, between the two Wheal Francos, somewhere about 100 fms.

In the meantime, while this work was going on, the engine-shaft was to be sunk to take the lode under the present workings at deeper levels; therefore, if this work has been done, there is no reason to complain. The writer states, also, that the mine is deluged through inattention, and the shaft full of lost lifts, and that even the top plunger will not set. All this may be the result of accident from the excessive late rains, or it may be partly a fault of some of the men by throwing a lump of iron, or something else, into the plunger column, which will be proved on the clocks being examined. The shaft I do not think can be lost; that will probably be found again almost perfect. If the writer had extended his vision a little further south, and had prophesied there, amongst the little mines, I think he would have hit the mark, for there the shaft was really lost with the lifts in it; and I have the honour, if it be one, of superintending its reconstruction, which I hope to accomplish in about six weeks; soon after which, with the present price of lead, I have reason to believe we shall open a good mine.

This goes to show that, if Capt. Lane had lost his shaft, he would not be the first. I can truly say, from the little I have seen of him, that I believe him to be a valuable, attentive, and useful agent, and not deserving what was said of him in the paragraph before alluded to.—J. PERRY: St. Blazey, near St. Austell, Dec. 27.

P.S. The writer of such calumny should state his name, then one would be able to judge whether he assisted in any way to let the water in, or prevent the clocks from working.—J. P.

##### WHEAL FRANCO.

SIR,—In your last week's Journal, a paragraph was inserted reflecting upon the management of the Wheal Franco. The statement I allude to, was that within the last few days, through insufficient attention, the mine was deluged with water, and the shaft lost full of lifts. Being an agent in Wheal Franco, I have made inquiries, and will give the answer in the words of the captain:—"It is true, in consequence of having such an influx of water, that our bottom lifts are working at present under water, but not that the water is gradually forking. I can assure you that every attention has been paid both by myself, pitmen, and sumpmen. I am in the mine at night as well as day. When I found the water rising so fast upon us, I at once began to send down another lift, the largest we had in the mine, which was an 8-in. in addition to the 12-in. then working. The engine was worked nine strokes per minute. This is the water under for some time; but at length I found the water to be still increasing so much that those lifts were not sufficient to keep it under, and it rose over the plunger. After it was working for some time, it began to fail; I saw then that nothing was to be done but to get a larger lift. I at once made it known to the committee; they gave me orders to proceed with it without delay. Orders were given on the Friday to three foundries to cast a 14-inch lift and 15-in. pumps, and on the Wednesday week after we put it to work; so everything was done in as speedy a manner as possible. Every one connected with the mine felt a deep interest in the work, and did their utmost. The late rains have caused a great influx of water; and it is not the only mine which has felt the effects. Between the late rains, we were discharging to the adit 210 gallons per minute; we are now discharging 500. At present, the principal part of the water is coming from the eastward, and which is highly mineralised; the rods in the lifts are almost the colour of copper. I hope we shall soon get things in a regular course of working again. The 20 fathom level east is driving in a beautiful country." Now, Sir, you will perceive from this report that your informant was in error, when he said the shaft was lost full of lifts; and, as many London adventurers will read your Journal, I have to beg the favour of your inserting this in your next week's impression.

Mark-lane, Dec. 30.

F. W. HEADING.

##### BALNOON CONSOLS MINE.

SIR,—In reply to "H." in your Journal of the 25th inst., I beg to say that the lode referred to as being worth 15*l.* per fm. was the standard lode before it improved. On referring to the enclosed report you will perceive that the lode was worth 15*l.* per fm. when it became small; but in cutting in south the lode was found standing at that direction very rich, no wall after cutting in 10 feet, and in a very small vein produced 559*l.* worth of tin. I am glad to say the mine still looks remarkably well; the lode being as good as ever, worth about 300*l.* per fm. In addition to this, we have many other lodes in the set, all of the most promising character. We intend to work some of them as soon as we can afford it, one of them having produced immense quantities of tin in Reeth Consols, and is still very rich in the ends in that mine coming towards our set. We have also one of the Wheal Reeth lodes, which might prove productive if wrought on, as the other lodes in that mine have been very rich. This set adjoins ours on the south-west. The part called the "Groth" in this mine (Balnoon) is well known, one bunch there in the last working having produced 100,000*l.* worth of tin. We shall next week sell not less than 300*l.* worth of tin for one month.—W. HOLLOW, Agent: Dec. 28.

##### MARK VALLEY MINES.

SIR,—A correspondent in your last Journal, who signs himself "A Marke Valley Shareholder," requests to be informed what the shareholders (whom, for the sake of doubt, of enhancing the value of the property, he is pleased to term "unfortunate") are to expect a return for the capital they have for so many years unprofitably embarked. If your correspondent were really a shareholder, duly registered, he could at all times obtain the fullest information of the state and prospects of the mine from the directors, or from myself as the secretary. He would be duly summoned by circular to all the meetings of the adventurers, where he would have an opportunity not only of examining the books and accounts, and of hearing the proceedings of the directors discussed in detail, but also of questioning them himself, and offering his own suggestions for the management of the mine. Moreover, he would receive, after each general meeting, a printed report of the operations, both at surface and underground, together with a balance-sheet, showing the financial condition of the company. If, however, any shareholder omits to become a registered proprietor, or does not choose to apply to the proper source for information, he certainly has no right to expect from the directors or myself, an answer to the question contained in his letter to your Journal.—JOHN HARDING: Salisbury, Dec. 29.

##### WEST WHEAL CARPENTER.

SIR,—Having seen a report on the prospects of this mine, and being in the locality I availed myself of an opportunity of seeing this new but highly promising piece of ground. I went there in company with a gentleman who is well acquainted with the locality; and having first taken a view of Wheal Carpenter, adjoining, from which a parcel of copper ore has recently been sold, which made upwards of 17*l.* per ton, we soon after reached West Carpenter, and was certainly very much surprised at the extraordinary good prospects of this concern. The lode has been cut in several places; in one pit, which is only 16 ft. deep, where it appears to be 20 ft. wide, having two well-defined walls, and producing the most splendid gossan I have witnessed for a long time, together with excellent specimens of silver lead ore, of which some wheelbarrows full have been taken out. The set, I understand, is very extensive; and from the very favourable indications already shown I have no hesitation in saying I believe West Carpenter will, at no distant period, become a great and dividend-paying mine. Tavistock, 29th Dec., 1852. OSWALD.

##### TREBURGET UNITED MINES.

SIR,—In the month of July last I was induced to purchase a large number of shares in these mines, from certain promises set forth in the prospectus of embarking upon an ultimate and handsome benefit for their outlay, and that at no very distant period. Immediately after the purchase I took a journey, to see and to enquire about my property. Being an entire stranger in the locality, and bearing in mind the prevailing disposition of interested parties to over-rate in their information, I employed the novel project of ascertaining the *who* and the *what* of the parties I addressed, before venturing upon my proposed interrogations, which, by the way, I recommend to adventurers similarly situated, as being a safe method to get at facts. Such I proved to be the case, and I am enabled to state that the information bearing upon the mine has never been known by me. It appears these mines had been worked for years, at an expense of thousands of pounds, in extending levels, sinking shafts, and erecting machinery. Several lodes of promising character were laid open in the adit, and one in particular was sunk upon to the depth of 13 fms. under the adit, where a leader of silver-lead was found, 3 in. wide. The old company, it appears, were unable to derive any benefit from this discovery, owing to the want of power of their machinery to pursue this object below the spot where first cut; and it would appear that at this juncture the mines were virtually abandoned, less from the want of means to erect adequate machinery than from the pernicious effects of litigation among the constituency. Soon after the property was turned over to other parties, and a spirited renewal of operations was contemplated. I have never yet seen any reports in your columns from these mines, as from most others in the county, which is much to be regretted.

My object in this letter, is both to convey what information I possess to shareholders privileged with the pursuit of your valuable Journal, and to seek to be made acquainted with other matters of which at the present I am ignorant. Certain questions have been asked and answered by letters; but I am not prepared to assert that these *pros* and *cons*, respecting the existence of the Old Treburget lode in these mines, were satisfactory or convincing to the majority of the shareholders; I confess they were not to my mind. If such lode does exist in this set, it is needless for me to say that we possess an unlooked for and important boon. But, however this may turn out, the shareholders should be considered entitled to the best information on this important subject; for, Sir, you will agree with me that they require a stimulus after waiting several months in *status quo*. I am at a loss to know what the agent is at this time doing on the mines. The engine was to have started before now; but I am told the work is not completed. Why such delay is occasioned several adventurers, with myself, would be glad to know. I hope the agent will see the necessity of bringing himself in the working department, to satisfy the company that all is going on right, and that no time is being lost.—A SHAREHOLDER: Tavistock, Dec. 29.

##### ON LEGITIMATE MINING.

To "ARGUS" (of TRURO).—SIR: I beg to state that your letters in the *Mining Journal* have been always read by me with pleasure, satisfaction, and profit; consequently, I think it right to publicly give you my best thanks, and with equal publicity to express my anxious hope that you will continue your labours, and, in my opinion, truly praiseworthy, watching of our mining transactions, and publish in this Journal your remarks, prophecies, and strictures, as you did heretofore. I ask this favour, because I believe that your letters and conduct have done much good towards the protection of fair dealing in mining transactions. I also believe that you have, and always will have, the sincere thanks and hearty support of those who are *respectable*, and real friends to our mining interest—I mean those men who encourage fair dealing in all our mining transactions. Such men have at all times induced the capitalist and contractor, frequently the whole is found in one management; yet be this as it may, still I have been safely led and benefited by your letters, and I, therefore, feel bound to entreat the public and adventurers to place their confidence in men who are known, and who are respected for their honesty, respectability, and proved practical knowledge in the various requirements for safely managing a mine. Without such requirements it is utterly hopeless, nay, impossible, for mining speculations to gain profit or satisfaction. You, Mr. "Argus," must have seen, known, and collected a general stock of practical knowledge, and with that you have manfully and beneficially warned the public of dangers in the past, present, and future times. In the next I anxiously hope we shall find more and more legitimate mining. If so, we shall find more confidence, more profit, and more respectable men connected with our mining transactions.—AN ADMIRER OF FAIR DEALING: Tavistock, Dec. 29.

P.S.—Like yourself I have taken a name, and for so doing I may be accused of "fighting behind the bush;" but I do not regard that as my motives are well intended, and the Editor of the *Mining Journal* has my address—the Editor of the *Weekly Dispatch* does not require more when he publishes the excellent letters of "Caustic," "Publicola," and "Censorius."

##### THE LINARES MINES.

SIR,—When I addressed you last, on the 24th Nov. (only a short month ago), the shares in this concern were 3*l.* 10*s.* to 3*l.* 15*s.*, and now they are 8*l.* 15*s.* So much for arousing the dormant feeling that has pervaded the establishment abroad and at home for a very long period. Those who are interested in its continued welfare and prosperity will have noticed that from the said 24th Nov. the value of the shares have increased in the market from week to week, and now stand at the price I have named. So satisfactory I am not one to find fault without a cause; my letter showed sufficient reason for the observations I therein made, and I am confident that the fact that sales have since been effected both in Spain and England amounting to the sum of 16,562*l.* 5*s.* 10*d.*, leaving plenty in stock, both of pig-lead as well as ore for the furnaces. They are neither raising or smelting any additional quantity of ore (according to the last advices), neither are the prospects improved generally since the date of my letter (they are good enough), which proves that if more activity had prevailed, the shares were then just as intrinsically worth 8*l.* 15*s.* as they are at this moment. With the present rate obtained for our produce, I look for brilliant results in 1853. Islington, Dec. 28. NUNZ.

##### THE ANGLO-CALIFORNIA GOLD MINING COMPANY.

SIR,—A. B., in your Journal of Saturday week, complained of not having his proper quota of the unsold shares, and remarks that the directors stated in their report that 78,000 shares only had then been issued, which would leave 22,000 remaining on hand. He then says he now learns that the number to be issued was not more than 20,000—consequently the issued shares must amount to 80,000; and he then states that the comparative difference between 78,000 and 20,000, and between 80,000 and 20,000, is 4000 shares, which 4000 the directors have either allotted to themselves or retained on hand; a small acquaintance with arithmetic would have taught him that the difference was only 2000 shares.

The report of the directors in October guarded itself against pledging them to one exact number of 78,000 shares, for reasons which the chairman explained to the meeting. Between the time of the issuing of the report and the distribution of the unsold shares, certain persons had been allowed to take some at par, in order to settle amicably disputes which previously existed on the subject, to the rights of some persons to shares in the company; and when the share-list was closely made up, for the purpose of ascertaining the exact number to be issued, so as permanently to close the list, it was found that an error in calculating the number had been made by the secretary or clerk to whom the duty had been confided. By these means the number of shares to be allotted was reduced considerably below that anticipated. Considering that the company had only been registered 10 months when this report was issued, and that during such period all the certificates had to be issued, and a debtor and creditor account of shares with every shareholder (to the number of 1500) opened, it is not a matter of surprise that such an error might have crept in.

However, the estimate of the assets given by the report will be fully realised, so that faith with the public in this important undertaking will be strictly maintained; and, it is a matter of no moment with the public whether the amount of funds be realised by the sale of 22,000 shares at par, or 17,000 at 2*s.* 6*d.* premium. Each shareholder has his rateable quota of shares; or, except where the applicant held under



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**HENNOCK.**—The shaft is still very spare for sinking, and without any alteration since my last. In the 50 south we are still driving by the side of the lode in a beautiful stratum of kilaas, the ground much improved since my last report; in the 50 north the lode is now about 2 ft. 6 in. wide, with more lead than I have seen anywhere to the north of the engine-shaft, with every chance of improvement; in fact, I consider it the most kindly looking lode I have ever seen in the mine. The lode in the 40 south are up from 3 to 4 ft. for about 18 ft. in length, and the lode still continues to produce a fair quantity of lead. In the 30 south the lode is 3 ft. wide, with a leader of good work for 2 ft., a very kindly lode. All our other operations are progressing very satisfactorily.

**HINDGTON DOWN CONSOLS.**—The general appearance of the mine are without important alteration since last reported on. We purpose sampling on Friday (the 31st Dec.), about 150 tons of ore.

**HOLMBUSH.**—I beg to inform you the ground in Hiltchins's shaft, below the 145 ft. level, and the cross-cut south at the above shaft is much the same. The lode in the diagonal shaft, sinking below the 145 ft. level, is 10 in. wide, composed of spar, mudi, and stones of ore. The lode in the 145 east is small and poor, but not without copper ore. In the 145 west we have not yet met with the great body of the cross-course; there ore, it must have underlain faster than it was found in the level above; however, we are pushing it on as fast as we possibly can. The lode in the 132 ft. level east is in a disordered state, and the ground rather hard; but we hope soon to get through the piece of disordered ground. The lode in the 132 south is a good producing occasional stones of lead. The lode in the rise over the 120 fathom level, east of the great cross-course, is 4 ft. wide, all of which is saved for work, but it is low priced. We expect to make a communication to the winze sinking below the 110 this week; the country in the said winze is soft, and we shall take down the lode after we have holed. The lode in the 110 east is large, producing 6 tons of ore per fm., but we fear it is low priced. The lode in the winze sinking below the 100 fathom level is 4½ ft. wide, producing 4 tons of ore per fm. Since the eastern winze has been holed the mine is thoroughly ventilated, and we have resumed driving towards the 110 east. The ground in the 124 ft. level, north and south of Wall's engine-shaft, is favourable. The tribute pitches on the whole are improved.

**KILBRICKEN.**—Yesterday (Dec. 27) we set the engine-shaft to sink 3 fathoms, at 40 ft. per fm.; I set them 3 fms. as an inducement for perseverance to get the shaft down. I have set to stop the back of the 20 ft. level, at 61. 10s. per fm., and the lode is yielding 20 ft. worth of ore per fm.; set to stop north of the last-mentioned at 61. 10s. per fm.; set the winze to sink in old bottoms, 1 fm., at 121. per fm.—Lode much the same, yielding 60 ft. worth of ore per fm.; set the 20 ft. level to drive east; since driving here we find an improvement, as it now yields good stones of lead ore. I have set the lode to sink, and have been driving for one month at 31. 10s., and the tramping of the rubbish from the floors and yards at 21s.

**KIRKCUDBRIGHTSHIRE.**—The lode in the 98 east is much the same. We have got through the bit of ore and west end of the shaft. The 74 east west has again improved, and is producing some good lead. The other bargains are as last reported.

**LAMERTON UNITED.**—Since last report the appearance of the lode in the adit level has greatly improved for the better; and, although we have been interrupted by its close proximity to the cross-course, its improvement is of the most satisfactory character, consisting of good capel stones, quartz, prlan, and rich yellow copper ore; this lode alone, leaving out the Great Wheel Friendship lode, is likely to produce the most satisfactory result.

**LEWIS.**—The north lode in the 100 ft. level, west from the engine-shaft, is 3½ ft. wide, producing stones of copper ore, with very promising appearances. The same lode in the 90 fathom level, east from tin shaft, is 1 ft. wide, good work for tin; the south lode in this level, east from tin shaft, is 16 in. wide, opening tribute ground. The same lode in the 80, east and west from tin shaft, is 1 ft. wide, opening tribute ground; the north lode in this level, east from Præd's shaft, is 16 in. wide, opening good tribute ground. The north lode in the 70, east from Præd's shaft, is 18 in. wide, worth 121. per fm. In the 60 ft. level, east from Præd's shaft, there is no alteration since last reported.

**LYDFORD CONSOLS.**—The lode in the 50 ft. level, north of the engine-shaft, is large, full 2 feet wide, and being composed of flookan, quartz, and occasional good stones of lead ore, is very kindly. In the cross-cut west in this level the ground is again hard. In the 36, north of engine-shaft, the lode is somewhat disordered.

**MOLLAND.**—The 52 west is still very large, carrying with it a kindly leader of ore on the south part, which has improved since last week, and is now worth 41. per fm.; in the same level east the lode is 4 ft. wide, producing stones of ore, and, from present appearance, we may expect a better lode; set to eight men, 1½ fm., at 61. 10s.; and in the western end, 1½ fm., at 81. The 42 west is a little larger than last week, and the ground is more favourable for exploring; set to two men, 1½ fm., at 31. 5s.; in the 42 east the lode has much the same appearance as when last reported on, set to four men, 1 fm., at 81.; the lode in the back of this level is worth 71. per fm., set to four men, 4 solid fms., at 31. 3s. The lode in the 30 west is still very large; this end I have not set, in consequence of having put the men to cut through the lode south, as we have not seen the south wall for some time past; the lode in the 30 east is 3 ft. wide, occasionally producing stones of ore, set to two men, 1 fm., at 51. 5s. The lode in the winze sinking under this level is 3 ft. wide, at present poor and unproductive, set to four men, 1 fm., at 91. The lode in the eastern hill is 20 in. wide, occasionally carrying fine spots of ore; the gossan I think to be auriferous, and am having the lode saved, set to two men, 2 fms., at 17. 10s. per fm.

**NANTES AND PENRHILW.**—The Etyntien deep level has been cleared and secured 66 fathoms east of the cross-cut, and the rails laid down to this point; here the level has come together, and requires whole sets of timber. The lode in Penrhilw engine-shaft is without alteration, about 4 ft. wide, and yielding good stones of ore. The 36 ft. level, west of Penrhilw shaft, is in a very strong lode, composed of spar and mudi, intermixed with clay-slate, but unproductive for lead ore; ditto driving east in a lode 4 ft. wide, yielding 8 cwt. of lead ore per fm. The 30, east of Taylor's, has improved latterly; I think we are near the run of the ground gone down from the level above; the lode is 3 ft. wide, yielding good stones of ore. The 46, west of Taylor's, is in a lode 4 ft. wide, unproductive for lead. The 30, west of Taylor's, is in a lode 7 ft. wide, yielding 12 cwt. of lead ore per fm. The lode in the back and bottom of the 30, on the south lode, are without much alteration, yielding 8 cwt. of lead ore per fm. In the tribute pitch in the back of the 20, on the north lode, 60 fms. east of Taylor's shaft, the lode is about 4 ft. wide, yielding 12 cwt. of lead per fm. In the pitch in the back of ditto, 70 fms. east of ditto, the lode is 4 ft. wide, yielding 15 cwt. of lead per fm.

**NEWLAND CONSOLS.**—An important discovery took place a few days ago close to the south boundary hedge of this valuable set by the owner of some four or five acres of land adjoining. A pit was sunk about 5 ft. deep, and laid open a lode from 4 ft. 2 in. to 3 feet wide, composed of flookan, green, and lead. Several tons of lead were thrown up from this pit, and the gossan was thickly impregnated with lead throughout; but in consequence of the lode running parallel with the boundary hedge, and dipping in this set, the pursuit is abandoned and the pit filled in. An adit level is driving with all possible speed to intersect those lodes.

**NORBURY.**—We are driving the cross-course with all possible speed, which is without alteration since my last.

**NORTH WHEAL ROBERT.**—We have driven 7 ft. in the 42 fathom level, west of Murchison's shaft, since the setting-day; the lode at present is large, being about 8 ft. wide, composed of flookan, spar, peach, and mudi, with occasional spots of ore; I like the appearance of it, and I think ere long we shall cut the same shoot of ore that is gone down from the 30 ft. level; the change appeared similar to that of the 30 ft. level, before they cut the ore there. We have also driven about 8 feet in the 30 ft. level west of Murchison's shaft; the lode is 3 ft. wide, composed of ore, flookan, capel, mudi, and spar, worth 3 tons of good quality ore per fm.; the ground in the cross-cut, in the 30 ft. level east, is very close and spare for breaking; also a similar appearance in the cross-cut in the adit, so that we cannot progress with hoing this piece of ground as fast as we could wish. We have commenced the dressing department, and progressing fairly. The work appears to turn out ore equally as fast as expected, and I hope to have 40 tons ready for sampling by February. The general appearance of the mine at present warrants it being classed among the dividend-paying mines in a short period.

**NORTH WHEAL TRELAWNY.**—The lode in the adit level south is 3 feet wide, producing from 2 to 3 cwt. of lead per fm. The lode in the stopes is also producing a fair quantity of lead.

**OLD WHEAL BASSET.**—The lode in the 20 ft. level, east of the last new shaft sunk, is 12 inches wide, and will turn out 10 cwt. of ore per fathom, opening good tribute ground. The lode in the adit west from Martin's shaft is 15 inches wide, and looking more promising.

**PENBROKE AND EAST CRINNIS.**—At Garden's engine-shaft, at Penbroke, in the 48 ft. level east, the lode is 3 ft. wide; 18 in. in the north part is producing very good ore, and much improved the last 6 ft. in driving. In the 58 ft. level east the lode is 2½ ft. wide, with very good stones of ore. In the 58, east of Carlyn's shaft, the lode is 18 in. wide, also producing good stones of ore. At Hunter's shaft, in the 30 west, the lode is 2 ft. wide, composed of gossan, with some malleable copper. At Reid's shaft, in the 20 west, the lode is 1 ft. wide, with some ore throughout. In the 70 west the lode is 18 in. wide; in the 70 west, on south, the lode is 2 ft. wide. At Gill's shaft, in the 90 west on Job's lode, the lode is 2½ ft. wide, producing about 1 ton of ore per fathom, worth 61. per fm.; this end is much improved. At Smith's shaft, in the 60 west, the lode is 3 ft. wide, with good stones of ore. The lode in the 40 east is 4 ft. wide, in the 70 east the lode is 18 in. wide. In the 90 east the lode is 3 ft. wide, 18 in. on the north part is producing good ore throughout. At Thomas's shaft, in the 30 west, the lode is 3 ft. wide, with ore, mudi, spar, prlan, &c. In the 30 east, on Thomas's south lode, the lode is 1 ft. wide.

**PENHALE CONSOLS.**—Engine-shaft: The shaft is now down 3 fms. below the 64 ft. level, and is still in course of sinking by eight men; the ground is moderate. The 64 ft. level north is suspended for a short time through deficiency of air. We are now rising in the back to communicate with the 56 ft. level; this rise is now producing 10 cwt. of ore per fm. In the 64 ft. level south the ground is good; the lode is small at present, producing 3 cwt. of ore per fathom; in the level here driving on the western part of the lode the ground is moderate; the lode is 6 in. wide, producing 4 cwt. of ore per fm. In the level driving below the 56 north the ground is fair; the lode is 1 ft. wide, producing 6 cwt. of ore per fm. In the 56 ft. level south we have come to whole ground; the lode is large, fully 2 ft. wide, of a very promising character; but at present poor for ore.—Gurney's Shaft: In the 48 fathom level south the ground is moderate; the lode is 7 in. wide, producing a little ore.—Morcom's Shaft: We have not been able to do anything here for some time past, but are making preparations for letting down the water. The tribute pitches generally are producing a fair quantity of ore.

**PENLYNE COURT.**—We are getting good saving work every day from the 15 ft. level east, while the branch of ore cut on the 21st Dec. in the level north continues most promising.

**PERRAN UNITED.**—The lode in the 10 ft. level is even better than when last reported; we have just attained the north wall, and in cross-cutting we have encountered several more very rich branches of grey ore. A considerable quantity of the 20 ft. level is now cleared, and I hope to be shortly in a position to commence a cross-cut to intersect the above lode in this level, where we have every reason to believe it will be found equally valuable. We have commenced to rise in the back of this level on two other lodes, from which we are raising some excellent stuff—the fact is, there is not another such mine as this in the county. It is generally believed that the ground now opened on the different lodes will yield, on being brought away, as much, or perhaps a larger portion of ore than was raised by the former parties, in which case we have an exceedingly rich mine, without even opening a foot of new ground. We are at present busy in preparing the dressing floors, and hope to have a good parcel of ore for sale in about six weeks. The building of the engine-house is progressing very favourably.

**PERRAN WHEAL JANE.**—We have two men driving in the adit on the cross-course, in order to ascertain the distance of the heave, and to see the effect produced on the lodes. Nine men are also actively employed sinking the engine-shaft; those

men are working ten times, in order to facilitate the work; the shaft is 10 ft. long by 6 ft. wide. Men are also engaged removing rubbish for the foundation of the engine-house and boiler-house, &c.; and quarries are raising stones for the buildings. The founders are making the engine; the bob, and several other parts, will be cast this week. The boiler is nearly finished; and all the other parts will be got ready in good time. The great copper lode is of great promise—having one of the finest backs for a copper lode in this county, and averaging in width from 14 to 20 ft.; and, from the nature of the stratum, the local position of the mine, and the number of large lodes passing through the set, there is every chance of our having one of the best mines in Cornwall.

**POLGAR AND LANCAIRHOW.**—We have cut through the Blue lode in the 25 ft. level, which is 3 ft. wide, unproductive. The ground in the cross-cut continues hard.

**RIX HILL.**—In presenting you with our monthly report of this mine, we beg to say that our prospects are not quite so good as on our last setting-day, the tribute having to be advanced a little. In the tubwork department we have suspended the driving on the new south lode east and west, it being at both points very poor and unpromising. We have put some men to drive west of the engine-shaft, on the south lode, which at this point is very strong and promising, producing some tin. We have four men employed rising from the 28 to the 17 fathom level, in order to prove the ground between these levels. We have two men employed in the 17 taking out the tributaries' work under the run. We cannot say the quantity of tin raised in the last two months until the tribute work is not to surface.

**ROUND HILL.**—The lode in the deep adit level, driving east, is 3 ft. wide, decomposed spar, and spotted with lead ore, good favourably for driving. We have also men clearing the cross-cut south, so as to get to the forebreast of the southernmost east and west lode with all possible dispatch. The deep adit level, driving south-west at the foot of the Round Hill, is in excellent ground for driving, our progress is about 12 fms. per month, which will enable us to prove a long piece of ground in a short time.

**SOUTH WHEAL RUSSELL.**—We are continuing to drive the cross-cuts north and south from Rundle's shaft, and have met with some ore in the country in driving south. We continue to drive the adit level north on the cross-course, and have during the last week intersected some beautiful branches of ore. From this circumstance we are strongly of opinion that we are not far from a good lode.

**ST. AUSTELL CONSOLS.**—This morning (Dec. 23), at Hoppet's shaft, we hauled up a few kibbles of the lode that we took down in cutting a grass plat to commence our rise from, and the stuff from the lode is worth, at the least, 10 cwt. of tin to 100 sacks of the stuff of 12 gallons each. —Dec. 25.—At Hancock's lode is a little harder, but as yet of precisely the same character as usual. At Hoppet's I shall commence proving the tin ground next week. In the present end the ground is clay-slate, and the lode is about 2 ft. wide, composed of tin, capel, and mudi, but not rich for tin. At Dowson's engine-shaft we have a little water, owing to the great excess of rains. I have moved the whim from Hancock's shaft to the engine-shaft, in order to facilitate the sinking; the ground is very good in the shaft.

**TAMAR SILVER-LEAD.**—In the 215 end, or bottom level, there has not been anything done since last reported on. The pumping engine has undergone sundry repairs, which has let in the water. In the 235 end the lode is 1 ft. wide, composed of mudi and spar, with a small quantity of lead ore. The lode in the 190 end is just as last reported. In the 175 end the lode is 2 ft. wide, and producing work of a congenial appearance. In the 160 end the lode is 1 ft. wide, work of good quality. In the 145 end the lode is also about 1 ft. wide, 6 in. of which is rich work. At the north mine, the 100 cross-cut is driven west 9 fms. 5 ft. 6 in.—in this end we are daily expecting to cut the lode. In the 90 end driving north the lode is 18 in. wide, and yielding work of a promising appearance. In the 80 end the lode is 3 ft. wide, composed of capel and fluor-spar, with spots of ore. In the winze sinking in the bottom of the 70 ft. level the lode is 2 ft. wide, and yielding work of a moderate quality.

**TAVY CONSOLS.**—The shaft is down 10 fms. below the 50, let 1 fm. to sink at 161. The 36 end is easier for driving, price 121. 10s. per fm.; this end is the same as last reported, excepting from 2 to 3 tons of ore per fm. The 28 end is the same as last reported, turning out about 4 tons of ore per fm. In the 46 end there is a capital lode, worth from 4 to 5 tons of ore per fm. Also a good lode in the winze sinking below the 36, to meet the rise in the 46. The mine is looking very well, and the machinery in good order.

**TINCROFT.**—On Highburrin tin lode, the stopes in the bottom of the 152, east of engine-shaft, are worth 141. per fm.; in the rise in the back of this level the lode is 4 ft. wide, worth 121. per fm. In the 142, driving east of Martin's east shaft, the lode is 3 ft. wide, worth 121. per fm. for tin and copper; in Martin's east shaft, sinking below this level, the lode is 4 ft. wide, worth 101. per fm. Chapple's lode, in the 142, west of engine-shaft, is 2 ft. wide, worth 51. per fm. for tin and copper. In the 120, driving west of Martin's east shaft, the lode is 3 ft. wide, worth 261. per fm.; in the west end, same level, the lode is 2 ft. wide, worth 151. per fm. In the winze sinking below this level the lode is 3 ft. wide, worth 101. per fm. for copper. In the winze sinking below the 100 west the lode is 5 ft. wide, worth 141. per fm. Dunkin's lode in the 110, driving west of engine-shaft, is 3 ft. wide, worth 101. per fm. for tin; in the east end same level, the lode is 2 ft. 6 in. wide, producing good stones of copper. In the 100 west, driving on the south part, the lode is 3 ft. wide, worth 81. per fm. for tin and copper; the stopes in the bottom of this level are worth 91. per fm. The lode in the 90 west is 2 ft. wide, worth 61. per fm. for copper. At North Tincroft, the lode in the 130, driving east of engine-shaft, is 3 ft. wide, worth 261. per fm.; in the west end, same level, the lode is 2 ft. 6 in. wide, worth 151. per fm. In the winze sinking below the 120 east the lode is 4 ft. wide, worth 801. per fm.; in the west end, same level, the lode is 3 ft. 6 in. wide, worth 281. per fm. In the 110 east, the lode is 2 ft. wide, but poor; in the west end, same level the lode is 4 ft. wide, worth 121. per fm.; in the winze sinking below this level, the lode is 4 ft. wide, worth 101. per fm. In the winze sinking below the 100 ft. level west the lode is 4 ft. wide, worth 281. per fm. Our tribute pitches throughout the mine are looking favourable.

**TRELAWNY.**—At Trelawny shaft, the lode in the 120 ft. level is 4 ft. wide, worth about 61. per fm. In the 167 ft. level, north end, the lode is 3 ft. wide, worth 51. per fm.; in the south end it is 3½ ft. wide, worth 81. per fm. In the 92 ft. level, both north and south end, the lode is 3 ft. wide, worth 131. per fm. At the north mine, the lode in the 120, east of engine-shaft, is 3 ft. wide, worth 131. per fm. In the 78 ft. level, north end, the lode is 3 ft. wide, worth 91. per fm. In the 68 ft. level, north end, west part, the lode is 2 ft. wide, worth 41. per fm.; the east part is 1 ft. wide, worth 91. per fm. We have not yet cut anything in the 55 cross-cut going east. Our stopes and pitches are not quite so bright at present as they have been.

**UNION (TIN).**—We have opened out about 17 fms. on the course of the lode, carrying half the width of it, and find it producing just the same quantities of tin as when first intersected. We sold, on Friday last, 601. 17s. 3d. worth of tin, the produce of four weeks' stamping with three heads, showing the value of the lode equal to what has been reported.

**WEST DING DONG.**—Since my last report we have driven our adit end, north-east on Richard's lode, 6 fms.; the lode is still improving in quality and in size—a lode 3 ft. wide, worth for tin from 181. to 201. fathom. Our new adit-end is sunk under the bottom of the lode in this level; the lode in this shaft is just as last reported, worth 3 fms. for tin 201. per fathom; but owing to an increase of water in the shaft from the lode, we are obliged to suspend the same for about seven or eight days' time, when we expect we shall have a new lift dropped to work in this shaft, which will enable us to go on more favourably. All the other parts of the mine are looking much the same as last reported. We intend putting with all possible speed nine heads more to work on tinstuff. We have a great quantity of tinstuff now lying on the surface.

**WEST GOGINAN.**—The lode in the engine-shaft, sinking under the 30 ft. level, is 6 ft. wide, but much the same in appearance as it has been for the last two months, spotted with lead ore, but not of any value at present.

**WESTON.**—There is no alteration in Cross's level since my last. The water is lowering in No. 3 shaft. The ground continues promising at Cwm Dingle, and the men are progressing rapidly with driving.

**WEST POLGOOTH AND HEWAS UNITED.**—About a week will complete the engine-shaft to the 24 ft. level. The north lode driving east in the 14 fathom level is about 3 ft. wide, good work for tin, presenting a pleasing appearance; in driving east on this lode a slide has rather disordered it for the moment, and shifted it a little to the north, but shall have it regular again in a few days. I am now satisfied that the discovery of the north lode is an important one, but shall require more machinery to explore it extensively and return the tin for market.

**WEST WHEAL ALFRED.**—We have succeeded in clearing up Carr's engine-shaft 2 ft. below the back of the bottom (55) level. The lode in the 45, west of Carr's engine-shaft, is 14 ft. wide, yielding stones of copper ore throughout. The lode in the 37 ft. level, west of Mexico shaft, is 12 ft. wide, containing good stones of copper ore. The lode in the 39 west is disordered by a slide. We have been hindered in consequence of the quantity of rain, and the delay in getting the different castings for the engine has impeded our progress as regards putting Cole's engine to work. We are promised the remainder of the castings next week, when we shall put the engine to work as quickly as possible.

**WEST WHEAL FANNY.**—The lode in the adit, south of the trial shaft, is large and exceeding kindly.

**WHEAL ANNA CONSOLS.**—The lode in the 12 ft. level, east is large, and of a most favourable character for the production of tin, but at present is unproductive; in fact, after the tin ground we have gone through we could not expect it to produce more tin. The lode in the 12 ft. level, driving north still retains our expectations from the north lodes, but we are using every means to get through it as early as possible. The steam stamps are working well, and after the floors are sufficiently in course, by the stuff stamped, with which it is necessary to make all dressing floors for tin, we shall soon be in the market with tin from underground. Since last report we have sold tin returned by the water stamps from the surface stuff, value 801. 9s. 7d., varying in price from 631. per ton.

**WHEAL ARTHUR.**—North Lode: The lode in the 50 west is upwards of 5 ft. wide, producing 1 ton of copper ore per fm., worth 71. 10s. per ton; this end is in about 20 fms. from cross-cut; we expect to have this level east cleared in a fortnight, and driving east of the great cross-course will then be commenced. The lode in the 35 west is 4 ft. wide, producing 2 tons of copper ore per fm.; in the 35 west, this level is disordered by a slide. The lode in the cross-cut driving north to the great cross-course about 27 fms., and as the lode is heaved by this cross-course we are driving south to cut it again; 9 fms. have already been driven, and no doubt the lode will be intersected in about one month; the lode in Cock's stopes, in the back of the 35 west, is 4 ft. wide, producing 2 tons of copper ore per fm., worth 81. per ton. The lode in Cruse's stopes, in the bottom of the 35 west, is 3 ft. wide, producing 1½ ton of copper ore per fm., worth 81. per ton. The lode in Broom's winze, sinking on the south branch, below the 35 east, is 2½ ft. wide, producing 1 ton of copper ore per fm., worth 71. per ton; this winze is down 5 ft. wide. The lode in Burgess's rise and shaft, in the back of the 35 east, is 3 ft. wide, producing 1½ ton of copper ore per fm., worth 71. 10s. per ton. The lode in Hartland's stopes, in the back of the 35 west, is 3 ft. wide, producing 1½ ton of copper ore per fm., worth 81. per ton. The lode in the 30 west is 3 ft. wide, composed of spar, mudi, gossan, and spots of copper ore; this level is extended 43 fms. west of the cross-cut. We have set a cross-cut to-day to drive north from the 50 fm. or adit level by six men, to cut Watson's ore or the north lode; the branch driving west from the 50 cross-cut south is 16 in. wide, and has yielded some good stones of yellow copper ore within the past few days. Our prospects generally are very satisfactory.

**WHEAL AUGUSTA (TIN).**—I have this day (Dec. 29) been underground, and am glad to report that I never saw the mine looking better. In the 28 fathom level, east from Graham's shaft, the lode of tin is 4 feet wide; in the same level, west from this shaft, we have a fine looking tin lode 4 feet wide, and tin from wall to wall; in the middle of this large lode there is a rich branch of tin—this looks well, indeed. In the stopes under the 18 on Wheal Augusta lode, we have a rich lode of tin, 12 in. wide.

**WHEAL CREBOR.**—Friday (Dec. 24) being our setting-day, the following work was let:—A pitch below the 12, east of Carlyn's winze, by four men, for two months, at 3s. 9d. in 17.; a pitch to the back of the 12, east of cross-course, by two men, at 2s.

in 17.; a pitch to the back of the 12, east of Odger's winze, by two men, at 12s. in 17.; these are let for two months. —Tatworth's Shaft: The 54 cross-cut north, by six men, started 2 fms., at 81. per fm. The 54 end, to drive west by six men, started 3 fms., at 51. per fm. A cross-cut to drive south in the 24 by two men, started 1 fm., at 61. 10s. per fm. The 12 end to drive west by four men, started 2 fms., at 51. per fm.; the 12 end east to drive by four men, started 3 fms., at 41. 5s. per fm. All the wheeling at Rundle's by six men, at 171. 17s. per month; all the filling and landing by two men, at 61. 6s. per month. There is no material alteration in the mine since my last.

**WHEAL FORTUNE (SOUTH TATWORTH).**—Yesterday (Dec. 28) being our setting-day, we have set the shaft at the former price. The men having some ground to cut down and timber at the north, has retarded our sinking this month—depth from adit 9 fms. 3 ft.; we have 10 ft. more to sink, and a plat to cut, which we hope to complete in the ensuing month, after which we shall drive on the course of the lode; this work will be very important, inasmuch as we shall then draw away the stuff with the whim, and dispense with four men, who are now drawing the tackle. The lode in the shaft, I should say, is changed for the better, as there is more black and yellow ore with more mudi and less lead, from this change I expect the lead will disappear at a deeper level, and the space which the mudi now occupies will be filled with yellow copper ore.

**WHEAL GOLDEN CONSOLS.**—Thorne's Shaft: Sinking under the 97 ft. level the ground is hard; the lode is 2 ft. wide, producing good stones of ore. In the 97 ft. level north the ground is moderate; the lode is 20 in. wide, producing 7 cwt. of ore per fm.—Young's Shaft: Sinking under the 87 ft. level the ground is good; the lode is 18 in. wide, producing 5 cwt. of ore per fm. In the 87 ft. level north the ground is good; the lode is 1 ft. wide, producing 4 cwt. of ore per fathom. In the 77 ft. level the ground is hard; the lode is poor at present.—Engine-shaft: Sinking under the 87 ft. level the ground and lode are both greatly improved since last reported. In the 87 ft. level south the ground is moderate; the lode is 1 ft. wide. We are getting near the cross-course; and when through this, I expect a great improvement.

**Webb's Shaft:** In the 70 ft. level south the ground is moderate; the lode is 1 ft. wide, producing a little ore.—Maxwell's Shaft: Sinking under the 60 fathom level the ground is moderate; the lode is 15 in. wide, producing good stones of ore. In the 60 ft. level south, on the eastern part of the lode, the ground is hard; the lode is 1 ft. wide, producing 2 cwt. of ore per fm., but we expect a great improvement shortly. The tribute department is looking well. We sold, on the 11th December, 50 tons of ores, at 161. 7s. 6d. per ton.

**WHEAL HAMLYN.**—I think we have cut one of the two lodes; it is about 6 ft. wide, composed of gossan, prlan, spar, mudi, &c., it appears to be in an unsettled state, having been so near the north and south lodes. We shall now go on with all spirit for Fuller's lode, which we hope to cut this month.

**WHEAL HARRIETT.**—The 50 driving east on the south lode is 8 in. wide. The 40 driving east of the cross-cut north, on the north lode, is 16 in. wide, which will produce 1 ton of ore per fathom—a kindly-looking lode. The 30 driving west of the north cross-cut, on a branch lode, is 7 in. wide, producing good stones of copper ore; this ore is in the bottom part of the end.

**WHEAL LANGFORD.**—Since my last, we have driven the 20 ft. level, west of Langford shaft 5 ft.—the silver lode is producing some saving work, but none of the copper lode has been taken down at this point since last week; the stopes in the back of this level, east of Mallich's shaft, below the copper ore, silver-lead lodes, are just as last reported on. In the cross-cut, west of Dare's shaft, we have driven during the past week 4 feet further north, in which we have intersected some branches of spar, interspersed with mudi. The stopes in the back of the 10 ft. level is without any particular alteration. We have broken from the stopes at the eastern point of the horse, during the past week, seven bags of silver ore of moderate quality.

**WHEAL MARY ANN.**—The lode in the 100 ft. level, north of Pollard's shaft, is 2 ft. wide, and worth 61. per fm.; in the same level south, the lode is 1 ft. 6 in. wide, and worth 51. per fm. The lode in the 90 north is disordered by a slide; in the same level south the lode is 2 ft. wide, and worth 71. per fm. In the 80 north the lode is 2 ft. wide, and worth 81. per fm.; in the same level south the lode is 3 ft. wide, and worth 81. per fm. In the 70 south the lode is as last reported, in the winze sinking under this level south the lode is 2 ft. wide, and worth 61. per fm. In the same level, south of Barratt's shaft, the lode is 2 ft. wide, and worth 71. per fm. The stopes and pitches throughout the mine are producing as much as usual. We sold on the 20th December a parcel of lead ore, computed at 55 tons, to Messrs. Michell and Son, at 241. 18s. 6d. per ton.

**WHEAL MAY.**—The lode in the stopes in the bottom of the 20 is 18 in. wide—6 in. of which is a leader, or branch, of grey copper ore. In the 30 ft. level, for 3 fms. east of the cross-course, there had been only a part of the lode taken down. I thought it desirable to see what the north part would prove, and accordingly put the end men to take it down; the lode is full 2½ ft. wide, from which we broke good stones of copper ore; and it has a very kindly appearance for productiveness.

**WHEAL RUSSELL.**—We have continued to sink the engine-shaft since my report of the 10th Dec.; but the incessant rains have again, in some degree, interrupted our progress; we have still stones of ore in the shaft. In the 60 south we have intersected a branch containing some good ore, but of not sufficient importance to pursue; we are still driving south on the cross-course at this level. We are still continuing to drive by the side of the lode at the 48; the appearances are much the same as last reported. We are still driving south on the cross-course in the 37, and continue to have fine stones of ore in it. The water is rather on the increase, which induces us to believe that the lode is not far before us. The water has been drained to below the 16 ft. level in the old works, and we have commenced to clear that level; when cleared we intend immediately to sink a winze below it. The pitch in the back of the 60 is still looking very well.

**WHEAL SAMSON.**—There is no alteration since last report.

**WHEAL VICTORIA.**—During the past week the shaftmen have sunk 2 ft. 6 in., making altogether 28 fms. 3 ft. below the adit.

**WHEAL WILLIAMS.**—The cutting of the plat and other work, named in my last, at the north lode engine-shaft is being got on with as fast as possible.

**YEOLAND CONSOLS.**—The engine-shaft is down to the 36 fathom level, and the sumpmen are cutting plat, and making all ready to sink again. We have carried the stopes in this level home to an eastern breast, and are now in readiness to drive, which we shall do at once, in order to get forward under the good lode of tin gone down in the bottom of the 24. The lode at the different points of operation is productive of about the usual quantity of tin per fathom, except in the stopes in the back of the 24, east of the winze, where it is very good, worth about 201. per fathom. The men in the copper pitch are still raising ore, and making good wages at 12s. in 17. At the surface we have succeeded (amid the almost constant rain and rough weather) in getting our new stamps in order of working. We are now fixing a larger lift for raising water for the dressing floors, which will be completed by the end of this week, when we shall start with 24 foot stamps and plenty of surface water for all purposes, which will enable us at once to increase our return. I hope and believe that at our next sale we shall have 8 or 9 tons of tin, which will give a good profit on our present working expenses.

**W**



**AUSTRALIA.**—The intelligence by the *Marco Polo*, to the 11th October, is 34 days later than that previously received. Along with her own letters she has brought the duplicates of those sent from Melbourne, 14 days earlier, by the mail steamer *Australian*, which sailed on the 28th of September for London, via Adelaide, but has not yet arrived. The latter vessel has on board gold to the extent of 9170 ozs. shipped at Sydney, 145,774 shipped at Melbourne and Geelong, and 65,000 shipped at Adelaide, making a total of about 220,000 ozs., valued at 880,000l. Although she received so small an amount at Sydney, the *Phaenician*, which sailed the day after, took 48,359 ozs. All the accounts are exceedingly favourable; the Mount Alexander deposits were fully maintaining their character, the totals brought down by escort during the week preceding the departure of the *Marco Polo* having been 99,000 ounces (400,000l.), while it was at the same time reported that the quantity still to be forwarded was rapidly accumulating. The price of gold at Melbourne was 60s. Bank bills 10 per cent. discount, and private bills 8½ per cent. The banks had ceased to make advances, and were buying gold on their own account.

From Sydney the latest papers are to the 2d of October, to which date the total amount of gold shipped from Sydney was 2,474,627l. The escort from Braidwood had brought in 489 ozs.; from Axialun, 260; Bell Creek, 30; Goulburne, 12; Sofoia, 102; Bathurst, 47; and Nassa, 45 ozs. A dispute with the Australian Agricultural Company's agent, with regard to digging on the company's land, had caused much unpleasantness on the Peel diggings. The Legislative Council had referred a bill to incorporate the Great Nugget Vein Company to a select committee. A report (it is said) has reached town, which appears to be pretty well authenticated, that a nugget of gold in quartz had been discovered at the Louisa, weighing upwards of 40 lbs. It was found by an old man, who is endeavouring to keep the matter as quiet as possible, lest it might be claimed by the Great Nugget Company, as was the case with the last large specimen that came to town from that quarter. With regard to all nations, all living by the same means. The amount of labour of all sorts performed is prodigious. In some places the water is 'dumbed' for 10 to 15 miles at a stretch, to supply the diggings. The custom is now very common of raising the water by undershot wheels supplied with buckets set in the rivers. I counted over 50 of these contrivances. A new machine for washing gold was in operation in Texas-hill. The earth is passed through a long cylinder, which receives it as it passes through. The earth is conducted down to it, in place of the water being raised up from the river.

**CALIFORNIA.**—We have news from San Francisco to the 16th of Nov., at which date the *Gowen Gate* left, with \$2,328,212 in specie on freight; and the *Illinois*, with the Californian mails, \$2,539,046 in freight, and \$400,000 in the hands of passengers. Sacramento had been nearly destroyed by fire. San Francisco, Marysville, Sonoma, and Calaveras, had also suffered severely from conflagration. The correspondent of the *Times* says:—"The news from the mines continues encouraging. In a recent journey through the southern mines, embracing the country between the Stanislaus, the Tuolumne, and the Merced rivers, and as far as Mariposa, I found the miners, on the whole, all doing well. At Mariposa operations were greatly limited for want of water; but on the Merced, for a space of 10 miles, the river swarmed with miners earnestly at work, and doing well on the 'bars,' which were producing great quantities of gold. It is astonishing how the country is becoming peopled. The most remote nooks and crannies, and the deepest ravines, have their inhabitants, gathered from all nations, all living by the same means. The amount of labour of all sorts performed is prodigious. In some places the water is 'dumbed' for 10 to 15 miles at a stretch, to supply the diggings. The custom is now very common of raising the water by undershot wheels supplied with buckets set in the rivers. I counted over 50 of these contrivances. A new machine for washing gold was in operation in Texas-hill. The earth is passed through a long cylinder, which receives it as it passes through. The earth is conducted down to it, in place of the water being raised up from the river."

The directors of the Mariposa and New Granada Gold Mining Company have given notice that they are about to call a meeting for the purpose of declaring a dividend, and also to decide upon the issue of 50,000 shares held in reserve by the company. The Mariposa Company, although only established about eight months, is the first of all the gold mining companies to pay a dividend to the shareholders; and although the dividend is only 10 per cent. on the capital, it is the first dividend paid during the company's existence. The result is most favourable. The period during which the company has been in active operation has been, perhaps, as unfavourable as could well be selected, the scarcity of water having prevented the full force of the machinery from being applied to the ores raised; and, as during the next six months there will probably be a greater abundance of water, the results cannot be expected to be less favourable to the shareholders than during the past six months.

The London agents of the South Australian Copper Smelting Company have received the subjoined communication from the secretary of that undertaking, dated Adelaide, South Australia, Sept. 6. Owing to the attractions of the gold-fields in the neighbouring colony of Victoria, the large supplies of copper from this source are likely for a time to be reduced, if not almost suspended. "We are suffering just now from the want of labour to a much greater extent than ever, and we look forward to the loss of our entire labouring population during the next six months of summer. With this prospect before us, we cannot expect to produce much, if any, copper ore during that period, and the supply of copper will of necessity be very limited, sufficient to justify you in demanding full rates for all we are able to ship you. We observe the efforts making in England to supply Australia with labour, and we sincerely hope that the interest excited in our behalf may continue undiminished until our wants are supplied. Our company alone could, at the present moment, employ 1000 men for 300 to 1000 persons, consisting of miners, engineers, blacksmiths, carpenters, masons, carters, labourers, and others, and all classes of colonists are, more or less, in want of labour."

The Australian Auriferous Ore and Reduction Mining Company have issued a notice to their shareholders that Mr. Webb, the local manager, has been obliged to wind up the company's affairs in Australia. The reason for this has not transpired, as Mr. Webb's letters, detailing the information, had been forwarded by the Australian Mail steamer, due the 30th Nov. It is supposed he will take the journey overland, and be here in the middle of the present month, when a general meeting of the shareholders will be summoned to hear his statements, and likewise determine future proceedings.

The Australian Consols Gold and Copper Mine shares were done after business hours at the value of ½ to 1 prem., and commanded great attention, in consequence of an arrangement entered into for leasing the minerals on the lands of the company, consisting of 26,000 acres, in the Hunter River district, a few miles distant from the auriferous estate of the Australian Agricultural Company. The conditions are, it is understood, 6d. per acre for a lease of 21 years, with 1-12th royalty, which will amount to a present bonus of 40s. per share on each share of the Australian Consols. The revenue of this company, it is also expected, will be very great, since, irrespective of that derivable from royalties, a large sum will come into the coffers of the company from the increased value of their lands, and the enhanced value of the town allotments, by reason of the numerous population that will locate on its domain.

The Anglo-Californian Gold Mining Company have despatches from Sir Henry Huntley, their superintendent, stating that, owing to the rains, he anticipated being able in a few days to set the water-wheel to work, so as to be able to form a correct estimate of what work might be effected by their present machinery. At the same time he has forwarded a box of specimens of gold quartz, taken indiscriminately from the Dieksburg Mine. These we have inspected; they are more than of average quality. In the poorest stones gold is perceptible to the naked eye.

The Agua Fria Gold Mining Company have received advice from the manager, Mr. Hepburn, stating that an agreement with Messrs. Palmer, Cook, and Co. had been executed, under which that firm received all right to the undelivered shares, in number 16,667, in consideration of receiving 1d. per share by instalments of 25 per cent. on the net profits of the Agua Fria Mine. By this arrangement the agreement now under treaty with the Gold Hill Company will be unfavourable to any division of profits to these shares. The private accounts received by the directors of the Agua Fria Mine itself are still stated to be very encouraging.

The Yuba River Company's letters from San Francisco, state the machine for washing the alluvial soil was at length complete, and had been put on board a vessel for Ouseley's Bar, on the 15th of November. The engineer-in-chief has it under his care. The mining agent writes from the Bar, dated the 13th of November, that he was anxiously awaiting its arrival. He says, "I am quite well, and in high spirits. There are millions of dollars worth on the Bar, only requiring the proper means of extracting them." Right's machine, before referred to, is the most approved method, and would be in full operation by the 20th of last month. The advice by the next mail are, therefore, looked for with much interest.

The West Mariposa Gold Mining Company have received advice dated Nov. 15, together with notarial copies of the agreements for the purchase of the property, as already notified, and of which possession had been duly taken by the officers of the company. The geological and experimental report furnished by the mining captain is highly satisfactory—not only as to the character of the quartz rock generally, but it also testifies the existence of an extensive surface deposit of ferruginous earth abounding in gold. This coating of earth, which, upon testing, has been found to produce at the rate of \$700 per ton, can be treated independently of heavy machinery, and has already afforded to the staff of workmen a means of employment, from which the most satisfactory results may be anticipated.

We understand the application for shares in the Brucutu Gold Mining Company (advertised in our last) is numerous, and from parties of the highest standing in London and elsewhere—fully equal, indeed, to the whole number that are to be issued, which we are not surprised at when we look at the locality and the profitable results attending the workings at the St. John del Rey. In this, which we have called the golden days of mining adventure, the present speculation appears to offer considerable and unusual advantages, the capital required is but small, the distance not great, the district undisturbed by sickness and governed by well-regulated discipline, such as to ensure fair play and early intelligence of results, we are led to anticipate most favourable results therefrom.

For obvious reasons, we have abstained from noticing before this the return of Capt. Jehu Hitchens again to this country, but the Australian Mining Company's meeting, held on Thursday, in which his name so prominently appears, no longer imposes any restraint on us. We can only say we are glad to congratulate him on his arrival, and the satisfactory manner in which his services (arduous as they must necessarily have been) were so fully appreciated and acknowledged by the unanimous vote of thanks of a large meeting of proprietors.

We understand that during the past week the whole of the shares in the Devon United Mines have been subscribed for by some highly influential parties in London. Very favourable reports have recently been received from Captain Carpenter, and his recommendations are now being steadily carried out. The whole of the machinery has been completed, at a cost of 4000l. All the requisite buildings have been erected, shaft sunk 40 fms., levels driven, and the mine placed in a most efficient position for thorough and profitable development.

We understand such is the demand for shares in the Crow Hill Mine (a new Irish adventure), that a 50-hp. plant has realised 3500l. A steam-pumping-engine is in course of erection. A large quantity of lead ore is already broken, and will be speedily brought to market. The shares are to be subdivided.

The Bottle Hill Mine is now in a most flourishing state: there are stopes being taken away at several different places, and all turning out well; one of them is a fine lode, 5 ft. wide, tiny throughout. There are just taken from the bottom of Josiah's shaft some stones of tin, of more than ordinary goodness.

At the Electric Telegraph Company of Ireland meeting, on Monday, it was resolved that the directors should have power to revive the agreement with the contractor, and also apply for an Act of Parliament to incorporate the company, limiting the liability of the shareholders, and such other objects as might be deemed expedient. The bill was lodged on the 29th, so as to comply with standing orders.

**DEATH.**—On the 18th December, John R. Reed, Esq., for many years manager of the Berehaven Mines, County of Cork, Ireland.

**RAILWAY CANCELLATION.**—The amount falling due in January is 1,024,260l. which will be paid for foreign companies.

## THE COPPER TRADE.

PRODUCE OF THE PRINCIPAL COPPER MINES OF CORNWALL AND DEVON FOR THE QUARTER ENDING DEC. 31, 1852.

Mines.	Sales.	Tons.	Amount.
Devon Great Consols	3	5594	£35,480 9 6
United Mines	3	3618	20,808 9 6
Wheal Buller	3	2561	15,532 19 6
Wheal Bassett	3	1789	14,094 8 6
Carn Brea	3	1737	11,673 9 6
Tincroft	3	2369	10,117 17 6
Far Consols	6	1196	9,799 17 0
West Canada	3	903	9,119 13 0
Fowey Consols	6	1125	7,997 19 6
South Canada	3	715	6,473 18 6
Alfred Consols	3	836	6,621 3 0
Wheal Seton	3	1264	6,236 12 0
North Pool	3	1164	6,109 6 6
Halannan and Croft Golith	3	1101	5,942 5 6
Phoenix Mines	2	500	5,485 2 0
Consolidated Mines	2	899	5,175 2 0
Wheal Friendship	3	513	5,113 6 0
South France	3	650	5,088 16 6
South Tolgus	3	600	4,773 14 0
East Croft and Durdance	2	722	4,487 18 0
West Treasury	2	619	4,315 4 6
North Basset	2	661	3,963 7 6
Condurow	2	549	3,861 5 6
North Roskar	2	489	3,855 3 6
Bedford United	3	480	3,513 14 6
Holmbush	2	690	2,932 13 0
Tresavean	2	913	2,731 17 6
Perran St. George	1	686	2,625 13 6
Marke Valley	2	646	2,593 10 6
Creeg Braws	2	526	2,456 14 6
East Pool	2	620	2,512 1 0
Botallack	2	277	2,294 13 6
West Seton	2	282	1,943 4 6
Camborne Vein	2	431	1,889 9 6
West Basset	2	282	1,662 0 0
St. Day United	1	290	1,551 5 6
Levant	1	303	1,438 17 0
Trerisey	1	254	1,433 13 6
Wheal Arthur	3	193	1,379 1 0
Treleigh Consols	3	199	1,287 11 0
Wheal Speedwell	3	141	1,188 15 6
Hingston Down	2	147	1,183 16 6
Wheal Trebarhwa	2	193	1,136 8 6
West Wheal Alfred	2	223	1,119 13 0
Dolcoath	3	297	1,063 3 0
Wheal Comfort	2	418	1,057 14 6
Gonamen	2	110	1,026 5 6
Wheal Clifford	2	120	1,017 3 0
Great Wheal Alfred	2	178	956 12 6
Tywartha	2	300	835 11 0
West Fowey Consols	1	104	798 4 0
North Damsel	2	113	775 2 6
Prideaux Wood	3	190	771 15 0
Tavy Consols	2	146	742 10 6
East Crowndale	2	72	719 5 6
West Damsel	2	161	718 3 6
Ponthe and West Grinnis	1	101	692 6 0
Wheal Trevellick	1	150	646 3 6
West Providence	1	44	392 18 0
Wheal Agar	3	110	571 3 0
Carvannal	2	67	459 2 6
Wheal Franco	1	83	408 15 6
Crane and Bejawa	1	43	348 6 0
Roscawell Downs	1	33	344 0 6
Wheal Brewer	2	37	299 2 6
Wheal Crebor	2	46	242 3 0
Wheal Gwulak	2	35	291 12 6
Hawke's Point	1	80	275 16 0
Wheal Unity	2	52	289 0 0
North Downs	2	91	634 10 6
Callington-Kelly Bray	1	67	256 9 6
Wheal Bury	1	57	254 12 6
West Towan	2	42	235 12 0
Trevellick	1	48	228 7 0
Wheal Russell	1	48	208 16 0
North Wheal Unity	1	18	204 1 6
Wheal Ellen	1	79	203 1 6
Wheal Carpenter	1	10	172 10 0
East Seton and Maude	1	28	170 2 0
Wheal Harriett	1	34	168 6 0
Trannack and Boscene	1	30	167 11 0
Wheal Cupid	1	23	161 13 0
North Wheal Buller	1	21	138 6 0
Rosewarne	1	31	156 4 0
East Wheal Rose	1	33	153 2 6
St. Aubyn and Grylls	1	22	152 6 0
Calstock United	1	30	144 0 0
East Gunnis Lake Junction	1	38	143 9 0
Cook's Kitchen	1	33	141 18 0
Clijas and Wentworth	1	20	141 10 0
West Trevellick	2	41	115 3 6
Waters Ore	1	70	140 0 0
Wheal Bedford	1	46	130 5 0
Wellington Mines	1	18	130 5 0
East Tolgus	1	21	126 10 6
Wheal Mandlin	1	22	121 11 0
Wheal Prosper	2	39	120 14 0
Hawkmoor	1	22	116 3 0
Wheal Lemon	2	24	112 4 0
West Russell	1	22	111 13 0
Trefry's Regulus	1	8	108 4 0
Unity Wood-East	1	12	107 2 0
Wheal Vyvyan	1	32	104 0 6
Wheal Jewel	1	25	97 14 6
Devon and Cornwall United	1	21	92 18 6
Wheal Gorland	1	13	91 0 0
Treizeys Ore	1	28	90 1 0
Wheal Trefusis	1	12	89 8 0
Grampier and St. Aubyn	1	15	87 0 0
East Wheal Leisure	1	38	78 17 0
Camborne Consols	1	11	76 8 6
Raleigh	1	11	73 8 6
Wheal Teldy	1	13	68 12 6
Bottle Hill	1	24	67 4 0
Tryphena	1	9	59 12 6
Great Wheal Leisure	1	13	53 19 0
Pendarves and St. Aubyn	1	6	47 3 0
Wheal Unity	1	22	46 15 0
Outfield	1	9	41 0 6
Copper Bottom	1	5	35 15 0
Great Wheal Charlotte	1	16	32 0 0
Wheal Virgin	1	11	26 2 6
Penhale	1	3	24 18 0
Nancemeling	1	2	18 3 0
British Arsenal	1	27	16 1 0
South Grinnis	1	4	15 16 0
Jackson's Ore	1	30	15 15 0
North Abram	2	47	15 12 6
Hawkins Ore	1	20	5 10 0
Godolphin	1	15	4 17 6

Companies by whom the above were purchased:—

Mines Royal.	Tons.	Amount.
Vivian and Sons	4394	£35,423 9 8
Freeman and Co.	4319	28,283 2 3
P. Grenfell and Sons	6052	31,170 2 3
Crown Copper Company	155	1,112 19 6
Sims, Williams, & Co.	4041	27,225 0 4
Williams, Foster, and Co.	8925	64,665 16 1
English and Australian	3501	18,694 13 9
Mason and Elkington	2592	17,063 14 6
F. Bankhart	1149	4,531 11 7
Copper Miners' Company	2808	16,453 5 4
Total	45,160	£273,868 15 6

The total sales for the year 1852, being as follows:—

The total sales for the year 1852, being as follows:—			
	Tons of ore.	Fine copper.	Amount.
To the end of March.....	38,113	2588 t 10 c.	£299,375 10 6
"    June.....	40,871	2992	229,664 16 6
"    September.....	41,449	2916 12	263,066 12 0
"    December.....	45,160	2978 14	273,868 15 6
Total.....	165,593	11,777 0	£792,975 14 6

**DUBLIN, Dec. 30.**—Australian Freehold Mining Company, 1½; British Australian Gold Mine, 1½; London and Californian Gold Crushing Company, for account, 3; Wicklow Copper Mining Company, 4½; Mining Company of Ireland, 1½; Mizen Head Copper Mine, ½; Royal Hibernian Mining Company, 1½; West Mariposa Gold Mine, 1½.

**HULL, Thursday.**—Our correspondents (Messrs. T. W. Flint and Co.) state that the market for English mining shares is without material alteration, and the amount of business transacted is somewhat limited. West Ding Dong, Trehanes, Kibrickens, Kennegys, and Trebarhwa, are inquired for. East Halannanings and Speedwells more offered. Gold shares have again been purchased to some extent.

In Miscellaneous Shares, transactions have taken place in—Bank of Australasia, 8½; Chartered Bank of India, Australia, and China, 3½; English, Scottish, and Australian Chartered Bank, 6½; London Chartered Bank of Australia, 5½; Bank of South Australia, 4½; Union Bank of Australia, 7½; 2½; North of New Zealand, 3½; General Screw Steam, 3½; Peninsular and Oriental Steam, 60; North of New Zealand, 3½; South Australian Land, 5½; 8½; 4 ex div.; Van Diemen's Land, 2½; 1½; City Railway Terminus, ½; 1½; Great Western and City Junction Railway, par to ½ prem.; Peel River Land and Mineral Company, ½ to ½ prem.; Crystal Palace, 4½.

## METAL MARKET, London, December 31, 1852.

ENGLISH IRON.	Per Ton.	FOREIGN IRON.	Per Ton.
Bar and bolt	£9 0 0	Swedish	10 15 0-11 0 0
In Wales	8 5 0	Russian CND	17 0 0
In Liverpool	8 15 0	Indian Charcoal Pigs	10 10 0
In Staffordshire	10 0 0	in London	10 10 0
Sheets, single	12 0 0		
" double	13 0 0		
Hoop	11 0 0		
Nail rod	10 0 0		
" square	10 0 0		
Rails (Wales)	10 0 0		
(Staffordshire)	10 0 0		
Railway Chairs, Clyde	5 0 0		
Pig, No. 1, Clyde	3 14 0		
3-5ths No. 1 & 2-5ths No. 3	3 13 0		
No. 1, in Wales	4 10 0		
Scottish Pig No. 1 in London	4 10 0		
Stirling's Patent	3 12 6		
Toughened Pigs	4 0 0		
On the spot	19 10 0		
To arrive	19 5 0		

Terms.—a, 2½ per cent. dis.; b, 3 ditto; c, net; d, 1½ per cent. dis.; e, 2 ditto; f, 1½ ditto; deliver in Liverpool 10s. per ton less.—Dis. for cash in 14 days, 10 per cent. Cold blast, L.o.b. in Wales.

The Scotch Pig-Iron Market has fluctuated very much this week—sales have been made at 76s. 6d. down to 70s., but we have again a gradually advancing market, with scarcely any iron offering at the rates quoted, viz., 73s. 6d. cash, 74s. 6d. to 75s. open prompt.

The demand for RAILS and manufactured iron of all kinds continues very great, buyers being anxious to secure stocks of the latter, before the anticipated advance next quarter-day.

SPELTER is firmer, and the prices advancing, 100 tons Spring delivery have been sold at 19l. 5s.

LEAD continues its upward movement, and the market is almost bare of this metal. Tin has advanced 1½ per ton, making the price of bars 103½.

Tin-plates are nominally 1s. per box higher in price. Coke 29s. to 30s. Charcoal 35s. to 36s. per box.

**GLASGOW, Dec. 30.**—Our makers have sold as much as they could do, and dealers here (having the vivid recollection of 1845-6, when prices fell in a short time from 37l. 10s. to 37l.) will not keep a ton in stock on their own account; and as the English speculators



At Perran Wheel Jano meeting, on the 20th Dec., the accounts showed—Balance at bank, £147. 17s. 6d.; Labour cost, Sept. and Oct., £72. 7s. 6d.; office expenses, £1. 13s. 4d.; stationery, £6. 12s. 6d.; call in Dec., £12. 10s. 4d. The balance of assets over liabilities (including Nov. and Dec. costs) is £121. 10s. 4d. A contract was settled with Messrs. Sandys, Vivian, and Co., for a steam-engine of 30-hp. cylinder, cast-iron steam chest, 9-ft. stroke in cylinder and shaft, complete, including a boiler 9 tons, for £754; and it was resolved that, on account of the expense, the report of the proceedings and accounts should not be printed.

At Callington Mines bi-monthly meeting, held yesterday (Peter Stainsby, Esq., in the chair), the accounts showed—Balance last account, £438. 2s.; mine cost for Sept., £322. 10s.; Oct., £71. 14s. 6d.; interest and discount, £44. 13s. 7d.; =£100. 13s. 9d.; Copper ore sold, £507. 0s. 8d.; silver-lead ore, £231. 12s. 7d.; amount realised by sale of engine and old materials, £195. 18s. 11d.; call, £250. 0s.; leaving balance to next account, £116. 1s. 7d. A call of 10s. per share was made, and a special meeting convened for the 19th of Jan., for the purpose of absolutely forfeiting those shares upon which the preceding calls shall not have been paid.

At East Gunnis Lake Mine bi-monthly meeting, on the 28th Dec., the accounts showed—Balance from last account, £187. 8s. 2d.; received for calls, £47. 17s. 6d.; =£235. 5s. 8d.; To Sept. cost, £136. 12s. 5d.; Oct., £187. 11s. 2d.; leaving balance to next account, £399. 2s. 1d. Arrears of call still due, £44. 12s. 6d.; carriage of ore sold 10th of August, £2. 10s. 10d.; estimate of copper ore for sale, £444. =£335. 10s. 5d.; against 399. 2s. 1d.; estimated liabilities, including Nov. and Dec. cost, £335. 10s. 5d.; the engine shaft is sinking below the 30 ft. level on the north side, which is from 2 to 3 ft. wide, with a very slight underlie, producing good saving work, altogether a very promising and kindly lode. The 30 ft. level is worth 1½ ton of good ore per ft. The tribute department is without change. The pitches are all in old backs, and at 13s. 4d. tribute.

At Mengo and Tregunnic Mine meeting on the 21st December, the accounts showed—Labour cost from 1st May to end Nov., £314. 13s. 3d.; merchants' bills, £46. 12s. 1d.; =£361. 5s. 4d.; Balance last account, £67. 9s. 1d.; call in June, £123. 12s. 0d.; leaving balance to next account, £167. 16s. 3d. A call of 17. 10s. per share was made. Moyle's shaft has been continued with the deepest adit, which is 21 fms. The deepest adit is extended 38 fms., with strong indications of being near a lode. The shallow adit east is driving in a lode worth 8½ fms. per fathom for tin; at present it is divided up in the end, though showing a little tin. About 85½ worth is at surface from Mengo, and 30½ worth at Tregunnic.

At South Wheel Charlotte quarterly meeting on the 1st Dec. the accounts showed—Tin sold in Nov., £324. 17s. 9d.; ditto Dec., £201. 17s. 7d.; call Sept., £129. 0d.; received for carriage of tin, £4. 12s. 1d.; =£199. 7s. 5d.; Balance last account, £119. 18s. 3d.; dues (1-20th), £28. 19s. 1d.; costs, Aug., Sept., and Oct., £300. 4s. 7d.; merchants' bills, £51. 16s. 8d.; leaving balance to next account, £167. 11s. 4d.

At Nant-y-Car Mine bi-monthly meeting, on the 15th Dec., the accounts showed—Labour cost underground in Oct., 195. 15s. 4d.; Nov., 78. 4s. 10d.; salaries, &c., 42. 18s. 3d.; merchants' bills, £30. 3s. 4d.; new machinery, £1. 10s. 0d.; printing, &c., £1. 10s. 0d.; =£147. 11s. 6d.; Balance last account, £31. 9s. 11d.; calls received, £152. 15s.; leaving balance to next account, £224. 6s. 7d.; since which calls have been paid amounting to 295. 10s., leaving arrears still due of 24. A call of 2s. 6d. per share was made. There is no alteration in the north adit. The stope continues to yield as usual. The winze in the 43 north has a leader of good copper ore—a promising pitch. The engine-shaft is down, the lifts fixed, and working well. The rise in the 43 south produces good stones of ore.

At Devon Consols North meeting, on the 21st December, the accounts showed—Balance from last account, £117. 0s. 2d.; Cost for Aug., 190. 7s. 6d.; Sept., 194. 1s. 2d.; Oct., 193. 0s. 7d.; =£587. 8s. 5d.; Nov., 78. 4s. 10d.; salaries, &c., 42. 18s. 3d.; merchants' bills, £30. 3s. 4d.; new machinery, £1. 10s. 0d.; printing, &c., £1. 10s. 0d.; =£147. 11s. 6d.; Balance last account, £31. 9s. 11d.; calls received, £152. 15s.; leaving balance to next account, £224. 6s. 7d. A call of 2s. 6d. per share was made. Since the last meeting, the engine-shaft has been sunk 19 fms. through a favourable killas, and is continuing down to meet the lode, which will pass through the shaft in 10 or 12 fms. further sinking. The steam-engine and machinery are working in the most satisfactory manner. The continuity of the mine to the Devon Great Consols leads to the expectation of shortly meeting with some rich courses of ore.

At Treburget United Mines adjoined meeting, on the 16th Dec., the accounts showed—Balance last account, 895. 2s. 1d.; Sept., 147. 9s. 1d.; Oct., 112. 8s. 6d.; leaving balance to next account, 635. 4s. 4d.; being cash in hand, 490. 14s. 4d.; arrears on call, 20. 10s. 0d.; Capt. J. T. J. in hand, £1. 10s. 0d.; in that containing he found a lode which, from its bearings, he has reason to hope is the old Treburget lode; he then drove a cross-cut south 10 feet, at 20 fms. depth, and there found the lode from 3 to 4 feet wide, 20 inches of which is a fine gossan, and the remainder capel, bearing every indication of proving productive at a deeper level; he claims it as a new and good discovery. At the new shaft they have gone through a splendid lode, 7 feet wide, westward 12 feet, and he recommends flat-rods being applied at once. The boiler at the foundry is nearly finished, the engine progressing, and the house quite ready to receive it; meanwhile, the water-wheel is doing good duty. The cauter lode in the 13 has been driven on 2½ fms.—lode about 2½ feet wide, composed of spar, muller, and flookan, with spots of lead here and there, and likely to yield well at deeper levels.

At Cwmdyde Rock and Green Lake Copper Mine bi-monthly meeting, on Thursday (John Webster, Esq., in the chair), the accounts showed—Balance last account, £1. 14s. 4d.; received for deposit and arrears on shares, 184. 18s. 6d.; premium on 112 of the shares, 224. 0s.; temporary loan, 180. 0s.; received from manager and pursuer on account of shares, 30. 0s.; for their salary, to 31st Dec., but not paid them, and abandoned, 153. 8s.; =£762. 0s. 10d.; To 37 shares not delivered, and still standing as stock of the company, 37. 5s.; paid Oct. cost, 267. 11s. 7d.; Nov., 481. 7s. 2d.; leaving balance in hand to next account, 92. 16s. 6d. The liabilities to the end of Jan. are estimated at 1460. 0s., which included the current cost for the period, the repayment of the temporary loan, and the year's interest due to the preference shares: 25 tons of ore had been transmitted to the smelting-houses for sale, and the result would prove satisfactory. The chairman had paid a visit to the property, where everything was progressing satisfactorily, though he was sorry to observe that the recent hurricane had occasioned serious damage, which would entail some expense, and delay the operations for forwarding the ore to market for a short period. A call of 1s. per share on the deposit shares was made. The committee were unanimously re-elected. Thanks were voted to the chairman, and the shares remaining undistributed will be distributed *pro rata* among the shareholders at par.

At West Wheel Towan meeting, on Wednesday, the accounts showed—Balance from the end of Aug., 49. 12s.; mine cost in Sept. and Oct., 1457. 11s. 6d.; =£1498. 3s. 6d.; By muller sold (less dues), 28. 19s. 11d.; tin ores sold, Oct. 6th and Nov. 10th, 1000. 0s. 3d.; copper ores sold, Oct. 14th (less dues), 108. 5s. 3d.; lead ores sold, Nov. 18th, 29. 4s. 4d.; leaving balance against mine of 322. 13s. 9d. The agent reported that the lode in the 40 cross-cut was 3 ft. wide—capel and spots of ore; the lead lode not so productive. Taylor's lode, in the 25 ft. level west, is 5 ft. wide—capel and spots of ore. The tin lode in the 25 is opening good tribute ground. In the 15, the stones of ore. The tribute pitches are looking well.

At Wheel Robins bi-monthly meeting, on the 28th Dec., the accounts showed—Balance last account, 230. 16s. 3d.; calls received, 218. 16s.; received for tin sold, 55. 9s.; =£514. 1s. 3d.; Labour cost for October, 170. 17s. 9d.; November, 190. 10s. 6d.; balance of May bills, 47. 11s. 2d.; royalty, &c., 9. 13s. 11d.; leaving balance to next account, 135. 14s. 1d.; with arrears of calls still due, 90. 12s. 6d. The liabilities were, due to merchants from June to the end of Nov., 363. 7s. 4d. A call of 2s. 6d. per share was made.

At Balmossie Consols Mine meeting, on the 10th December, the accounts showed—Black tin sold, 663. 12s. 1d.; call in August, 253. 12s. 1d.; Labour cost from July to end of Oct., 339. 6s. 4d.; merchants' bills, 157. 2s. 5d.; surgeon, 3. 16s.; balance from last account, 47. 6s. 4d.; leaving balance to next account, 131. 1s. 3d. The tin lode at south flat, but shaft is working 100 ft. without reaching the present in consequence of the increase of water; the winze west is worth 15½ per fathom; south, from whence they have opened the lode for 10 feet without reaching the wall, they have risen 500. 0s. worth of tin. The main lode of Reeth Consols is rich within 60 fms. of the boundary, and has not been wrought in Balmossie, where they have an extensive piece of virgin ground through which it must pass. Costean pits will be put down to trace it as soon as the weather moderates.

At the Orscoe Mine meeting, on Thursday (J. Y. Watson, Esq., in the chair), the accounts showed—Calls, 195. 12s. 6d.; Balance last account, 72. 15s. 7d.; labour cost for Oct., 57. 2s. 3d.; ditto Nov., 51. 4s. 10d.; leaving balance in hand, 31. 9s. 11d. There is a balance of assets over liabilities of £132. 11s. Captain Michell stated that nothing had been done since last meeting beyond driving the 10 up the east and west lode, the last 4 or 5 fathoms of which would produce about 4 or 5 cwt. of ore per ft. Up to the present time he had not been able to procure a second-hand steam-engine.

At Prince Albert Consols meeting, on Wednesday, the accounts showed—Balance in hand, 197. 7s. 11d.; calls, 837. =£1034. 7s. 11d.; By Sandys, Vivian, and Co., on account of steam-engine, 400. 0s.; labour cost, Sept. and Oct., 415. 10s. 3d.; office expenses, two months, 16. 18s. 10d.; Princess Royal, rent for one year, 10. 0s.; inspection, 6. 12s. 6d.; leaving balance in hand, 184. 17s. 4d. The statement of assets shows: Balance at bankers, 184. 17s. 4d.; received since for calls, 183. 10s.; arrears due for calls, 707. 17s. 11d.; tin sold, 10. 0s.; silver-lead ore, 83. 18s. 6d.; =£1034. 7s. 11d. The liabilities, to Sandys, Vivian, and Co.'s draft due, 4th Jan., 400. 0s.; ditto for stamps, 11. 16s. 2d.; Nov. and Dec. cost, 480. 0s.; sundries, 20. 0s.; leaving balance, 147. 9s. 8d. Captain John Davies reported that a great improvement in the mine had taken place, the shaft sunk to the 20 fathom level, and the ends extended east and west. In the former they had cut a shoot of ore seen in the level above; the lode was rich.

At Wheel Kitty meeting, on Wednesday, the accounts showed—Calls, 760. 0s.; Labour cost for Sept., Oct., and Nov., 432. 5s. 1d.; office expenses, 16. 7s. 8d.; travelling expenses, 6. 6s. 9d.; leaving balance in hand, 285. 0s. 6d. The balance of assets over liabilities, including Dec. and Jan. costs, was 1007. 10s. 6d. Captain John Davies reported that the new engine was set to work on the 30th Nov., and has proved, with the boilers, in first-rate order. The water is now in the 32 ft. level, and in the 30 ft. level the pitwork would reach the bottom of the shaft. Before next meeting, a great many tributors would be at work. A call of 5s. per share was made.

At the Wheel Arthur meeting, on Thursday, the accounts showed—Balance in hand last account, 771. 19s. 8d.; calls, 400. 0s.; carriage of ore, 8. 5d.; bills receivable for ore sold, 207. 13s. 5d.; =£3257. 18s. 1d.; By labour cost for Oct., 700. 18s. 3d.; Nov., 555. 13s. 8d.; leaving balance in hand, 1993. 4s. The balance of assets over liabilities was 2634. 16s. Capt. T. Carpenter reported that the lode in the 50 ft. level is 5 ft. wide, yielding 1 ton of ore per ft., worth 8s. 10s. per ton. In the 35 ft. level, it is 4 ft. wide, worth 16s. per ft. In the 30 ft. level, it is 3 ft. wide, worth 14s. per ft. In the 25 ft. level, it is 2 ft. wide, worth 12s. per ft. In the 20 ft. level, it is 1 ft. wide, worth 10s. per ft. Mr. Wm. Watson (the pursuer) reported that there were on the dressing-floors 8 tons of best quality ore and 32 tons of seconds, and they expected to sample December and January ores about 100 tons. The last two parcels realised (No. 1, 10 tons, 14. 15s. 6d.; and No. 2, 30 tons, 5. 0s. 6d. per ton), 429. 3s. Since the commencement the total costs have been 6076. 16s. 3d., against which there have been sold 541 tons of copper ore, realising 3854. 8s. 7d. The committee congratulated the shareholders on the progress and position of the mine.

Wheel Golden, South Tamar, Callington, Trelawny, and Cairnmore, have sold lead ores during the week.

East Pool, Polberro, and Union, have sold tin.

The Polberro Mines have sold during the past year 333 tons 14 cwt. 1 qr. 16 lbs. of black tin, which realised 17,833. 4s., of which the Callenick Company purchased 101 tons 2 cwt. 2 qrs. 19 lbs., amounting to 5137. 4s. 3d.; Charlestown, 77 tons 13 cwt. 1 qr. 23 lbs., 3665. 8s. 3d.; Union, 72 tons 13 cwt. 1 qr. 23 lbs., 4166. 1s. 3d.; Blisoe, 30 tons 3 cwt. 2 qrs. 15 lbs., 1540. 1s. 10d.; Trellethall, 25 tons 13 cwt. 8 qrs., 1651. 4s. 4d.; and Cairnmore, 23 tons 3 cwt. 2 qrs. 15 lbs., 1082. 7s. Of this sum of 17,833. 4s., three dividends have been paid, amounting to 2966. 13s. 4d.

Wheel Trelawny Mine sold, on Tuesday, the 28th of Dec., 75 tons of silver-lead ores at 25. 6s. 6d. per ton, realising 1899. 7s. 6d.

The Knockmahon Mines (Ireland) made a profit of 1586. 10s. in Oct. last. At Devon Kapunda, the engine-shaft will be down to the 22 ft. level by the end of next week; in sinking below that level, the two fine lodes seen in the cross-cut south will soon be intersected by the shaft, and at the next level below the copper lode, which has been opened in the 22 ft. level at the old underlying shaft, where it is nearly all saving work, it will be cut into, and may be expected to produce good and profitable work. The lode in the 14 west is just as last reported. The tributors' ore will be dressed as soon as possible. Batters' shaft will be closed and divided from the 14 to the 22, and the driving of the 22, under the lead ground, continued.

At Devon Barra Barra, nearly 4 fms. had been driven into the great Brake lode, and no north wall seen; some fine stones of ore were broken, intermixed with tin, and quantities of black ore were washed out of the lode, giving the mine the appearance of a colliery. Since the above report was received a leader of tin, embedded in a fine capel, has been cut in the lode about 2 ft. wide, intermingled with black and grey ore. It is considered that the produce of this part of the lode will be equal to the expenditure of the mine; the lode is not yet cut through. Two pitches are now set in the south and middle lodes, upon the former of which the finest stones of ore yet seen in the mine had been broken. Every part of the mine is rapidly improving.

The Union Tin Mine, as shown by the captain's report, has now gained a position in the list of mines which have sold ores; and from present appearances there is every hope of its being soon placed with the dividend mines. The report of the 13th Dec. states that the lode is 9 feet wide; subsequent reports are still better—the ends extended 8 fathoms; 500 sacks of work were stamped, and several hundred more at the surface. The size and quality of the lode continues, and since that date upwards of 600. 0s. of tin has been sold, the produce of three or four weeks' stamping, with only three hands. The eastern and western driving, on only half the lode, will more than supply the stamps twice over, and hence there is a necessity for increased stamping power. The lode may be worked on for 400 or 500 fathoms. The ground is soft, the expenses, therefore, will be trifling; and there is no doubt but that 20 tons of tin per month will be sold from the shallow levels.

During the week, shares have changed hands in Alfred Consols, West Providence, Tremayne, Basset, Merilyn, South Tamar, West Caradon, South Caradon, Kirkcubrightshire, Trelawny, Conduwry, Bedford United, Mary Ann, Black Gap, Treahen, South Frances, Cook's Kitchen, Treleigh, Wheel Reeth, West Ding Dong, Tregadock, Gonamena, South Phoenix, South-West Phoenix, Great Phoenix Consols, Wheel Robert, Crow Hill, Clive, Cubert, Wheel Fortune (South Tawton), Elizabeth, Great Moor Pool, Coniston, Great Wheel Tonkin, Great Bryn, Exmoor Eliza, West Phoenix, Poltimore, Great Wheel Vor, Devon United, West Wheel Alfred, East Polgoth, Gelford, East Wheel George, Rix Hill, East Crowndale, East Tamar, East Gunnis Lake, Hington Down, Great Badden, North British Barra Barra, St. Day United, Wheel Samson, Weston, Monarch, Hencock, Union Tin, Great Crinnis, Zion, Arthur, East Russell, Penllyn, Craddock Moor, Gawton United, Lamerton, Edward, Russell, Wyndham Consols, Penzance Consols, St. Austell Consols, Boscan, Boscon, East Baleswidden, Wheel Carn, Wheel Augusta, North Trelawny, Cawson Hill, Great West Bocks, Trelawny, Royal Hill, Royal Hill, Kenmare, Mining Company of Ireland, Clascadun, Mizen Head, Gonamena, South Cork, &c.

In Foreign Mines, transactions have taken place in Alten, Linares, Grand Duchy of Baden, Imperial Brazilian, Barra Barra, Cobre, Copiapo, Santiago, St. John del Rey, United Mexican, Jamaica, Worthing, &c.

Advices have been received from the Alten Mines, from which it appears that the 30 ft. level west is poor at Ralpas; the stope is looking well, and yield good returns. At the United, Ward's sink has been suspended; Woodfall's yields remunerative returns. At the Old Mine the tribute returns increase. The western stope, at Shingli, produces 4 to 5 tons per ft. At Michell's the pitches look better.

The Linares Mining Company have received advices to the 18th Dec. Ore weighed in, 91 tons 4 cwt.; total in stock, 381½ tons. Pig-lead smelted, 34 tons 18 cwt.; total in stock, 183 tons. The engine is now drawing direct from the bottom. The 55, west of Buena Ventura winze, is worth 1 ton of ore per fathom. The stope in the 55, between San Antonio and Las Nieves, produce 3½ tons of lead ore per ft.; 45, east of Esperanza, 1½ ton; 1a Suerte winze, below the 31, is worth 2 tons of ore per fathom; the 31, west of San Juan, ½ ton; east on the north lode, 3½ tons; west, 1 ton; the 31, east of Thorne's, 2½ tons per ft. The tribute pitches are yielding fairly.

The Royal Santiago Mining Company have advices to the 24th of Nov. The mining force is confined to the stope east and west of Taylor's and the 32 cross-cut to Thompson's. Owing to the cholera prevailing, the greater part of the labourers are in the hospital. The stope is turning out well—east, 8 tons of copper ore per fathom; west, 3 tons. They have only been able to clean 40 tons.

At the Australian Mining Company's special meeting on Thursday, the report submitted by the directors was of the most satisfactory character; it gave an outline of a voluminous one by Captain Hitchens, who had recently arrived from the colony, showing that very great mismanagement had taken place, and most extraordinary operations had been carried on. The Tungskillo Mine had not been properly worked, and their whole property had been shamefully neglected. Future prospects were, however, exceedingly good. A full report will be found in another column.

A special general meeting of the shareholders in the Worthing (South Australia) Mining Company is to be held on Wednesday, for the purpose of dividing the shares into 100,000, of 1s. each, instead of 10,000 of 10s. each, as at present. This company's property is situated about 16 miles from Adelaide, and upon which they have been working some very promising copper mines. They have also a lease of Wheel Maria, which is considered one of the best copper mines in the colony. The following extract from Mr. Dean's report to the directors, in June last, will, however, be read with peculiar interest at present:—"From the evidence presented by the reports upon the rocks found in the neighbourhood of the Worthing Mines, I am induced to think that they belong to, or are adjacent to, the gold-bearing series in which gold has hitherto been met with in Australia; and this view is somewhat confirmed by the fact, that I have discovered strong traces of gold in a small piece of quartz of about ¼ lb. weight, broken from the lode at the water shaft in the company's property. There being no other specimens of quartz at the company's offices, I have not been enabled to procure the matter further; but I strongly recommend that the agents be instructed to collect about 10 tons of the contents of the lodes, and after thoroughly spalling and mixing, to extract therefrom a fair supply for assay. An average produce of 1 oz. of gold per ton of stone, would well repay the cost of working; and, from the great width of the Worthing lodes, they would yield a very large supply of mineral at a comparatively cheap rate. It is, therefore, very desirable to ascertain if they be profitably auriferous." We may add that finisements of gold have been recently found in the neighbourhood of the company's property, and no less than 160 licenses have been taken out according to the last advices, and the diggers have increased from 300 to 500 between the 18th of September and the 4th of October last.

The settlement of the fortnight's account has formed the chief feature in the gold mining share market this week, and has proved extraordinarily heavy—in fact, it may be said to be the heaviest ever known in this department. Business has thus been checked, and, consequently, the movement in prices has not been great. On the whole, however, the market may be said to have been characterised by a great steadiness, as the public are decidedly disposed to buy, and there are few willing sellers; under these circumstances, higher prices are, consequently, looked for. In the early part of the week, Port Philip, Colonial Gold, Yuba River, and West Mariposa, were most in demand. Californian shares generally have exhibited considerable firmness, and but few transactions have taken place in them. The fact that the Agua Fria Company had entered into an engagement with Messrs. Palmer, Cook, and Co., of San Francisco, to relinquish the 16,667 shares held by them, on condition of receiving one-quarter of the net profits of the Agua Fria vein, has considerably enhanced the value of this stock. Australian Freeholds were enquired for yesterday very largely, and left off with a considerable upward tendency; and even the less favourable descriptions find buyers, though not to the same extent as the better known companies; this arises from the fact, that in the latter there are but few sellers. The Colonial Gold Company have received a bill of lading from their superintendent for 8700 ozs. of gold-dust, shipped per *Australian*; the same company realised the profit of 1300. 0s. on 2670 ozs. of gold, lately forwarded to them. The Australian Freehold are likewise in anticipation of 2846 ozs. by the same vessel. The works of the Rocky Bar Company were suspended, owing to a deficiency of steam-power, and their adit having entered the greenstone formation. The junction between the Gold Hill and Agua Fria Company, it is anticipated, will be carried out, and the machinery immediately erected. The announcement that the Australian Auriferous Ore Reduction Company were about to wind-up their affairs in the colony has created an unfavourable feeling towards some of the less stable undertakings. From the absence of all information from Mr. Webb, the superintendent (his letters detailing the reasons which have induced him to take this step not having arrived, though forwarded by the *Australian* mail steamer, long since due), the directors are unable to afford any decisive intelligence, and the arrival of that vessel is anxiously looked forward to. A company is in course of formation for working the Franklin Gold Mine, in Virginia. Generally, it may be observed, with regard to the North-American gold companies, that, although there has not been much enquiry for them, they have sustained their position; sales have, however, been effected both in Waller's and L'Aigle d'Or. The transactions on the Stock Exchange will be found in the usual place. The non-official quotations are—Peel River Land and Mineral Company, 14 to 15 prem.; Nugget Vein, 3½ to 3¾ prem.; Burn's Creek, ½ to ¾ prem.; Monarch, ½ to ¾ prem.; L'Aigle d'Or, ½ to ¾ prem.; Waller Gold, ½ to ¾ prem.; Garnett and Mosely, ½ to ¾ prem.; Australian Mutual, ½ dis. to par; Australian Consols, ½ to 1 premium; Chartered Australian Land Mining Company, par to ½ prem.; Pontgibaud Silver-Lead, 2 to 3 prem.; Anglo-Australian, ½ to ¾ prem.; Veragaus, ½ to ¾ premium.

## LEAD ORES

Sold on the 24th December.

Mines.	Tons.	Price per ton.	Purchasers.
Wheal Golden	50	£16 7 6	—
South Tamar	75	21 6 6	T. Somers.
Sold on the Mine, on the 29th December.			
Callington	24	£21 10 0	Walker, Parker, & Co.
Sold at Baginbun, on the 29th December.			
Cairnmore	45	£15 10 0	Walker, Parker, & Co.
Sold in December.			
Mendip Hills	25	£21 0 0	—
Linares	500	18 0 0	Newton, Keates, & Co.
East Wheel Rose	46	17 0 0	R. Michell & Son.
ditto	15	18 7 6	Tamar Company.
Wheal Trelawny	75	23 6 6	ditto

## BLACK TIN.

Mines.	Tons.	Price.	Amount.	Purchasers.
Balmossie Consols	2 15	0 18	£360 0 0	£165 2 6
Sold on the 8th December.				
ditto	3 8	1 2	£450 0 0	£225 16 1
ditto	0 3	3 7	£32 0 0	9 6 0
Sold on the 7th December.				
East Pool	6 10	0 0	£333 16 6	—
Sold on the 20th December.				
ditto	4 5	0 0	£304 19 4	—
Sold on the 10th December.				
Wheal Robins	1 1	2 6	£248 0 0	£51 14 6
ditto	0 5	1 8	£14 0 0	3 14 6
Sold on the 24th December.				
Polberro	28	0 0	£1588 16 0	—
Union	0 11	1 16	£63 0 0	23 17 9—New Blowing.
ditto	0 8	1 4	£56 0 0	23 4 0
ditto	0 0	3 8	£43 5 0	1 13 6
Drake Walls (Dec. 4)	6 5	1 15	£112 6	386 6 9—Union Tin Co.
ditto	3 10	2 11	£63 0 0	229 8 10—ditto
ditto (Dec. 9)	6 2	1 10	£112 6	376 19 1—ditto
ditto (Dec. 22)	3 9	2 8	£65 0 0	226 2 1—Enthoven.
Total, 19 tons 7 cwt. 3 qrs. 16 lbs.—amount, £1238. 4s. 7d.				
(11. per ton added for carriage.)				
Lewis (Dec. 15)	10	2 3 15	£390 2 6	£390 15 3—Union Tin Co.
ditto	1	4 1 27	£54 0 0	66 2 6—ditto
ditto (Dec. 23)	3 6	2 10	£69 6 0	196 17 0—ditto
ditto (Dec. 22)	0 12	0 11	£54 0 0	32 14 9—Daubuz & Co.
Total, 14 tons 6 cwt. 0 qrs. 10 lbs.—amount, 903. 2s. 7d.				
(10s. per ton added for carriage.)				
Sold on the Mine, on the 29th December.				
Chyprase Consols	2 8	1 9	£261 0 0	£147 8 1—Williams & Co.
ditto	0 9	2 20	£54 10 0	26 7 5—ditto
ditto	0 2	3 24	£51 0 0	7 12 7—ditto
Sold during December.				
South Wh. Charlotte	11	0 0	£375 15 4	—
Wheal Guskus	—	—	207 12 0	—

## COPPER ORES.

Sampled December 8, and sold at the Royal Hotel, Truro, December 23.

Mines.	Tons.	Price.	Mines.	Tons.	Price.
Devon Gt. Consols.	107	£6 17 6	Holmbush	100	£4
Wheal Josiah			ditto	66	4
ditto	101	7 10 6	ditto	53	9 1
ditto	98	6 9 6	Marke Valley	90	4
ditto	95	11 2 6	ditto	86	4
ditto	94	5 1 6	ditto	75	1
ditto	93	7 10 6	ditto	45	2 1
ditto	86	8 1 0	ditto	17	4 1
ditto	83	3 10 0	Phoenix Mines.	87	5 1
ditto	79	6 15 0	ditto	60	9 1
ditto	73	5 17 0	ditto	50	23
ditto	63	3 12 6	ditto	43	5
ditto	46	11 0 0	Wheal Friendship	45	11
Wheal Anna Maria	106	6 19 6	ditto	45	5
ditto	105	5 19 6	ditto	31	7 1
ditto	103	5 18 0	Bedford United Mines	34	8
ditto	60	7 3 0	ditto	60	5
ditto	46	5 19 0	Fowey Consols.	81	8
Wheal Fanny	119	6 15 0	ditto	44	6 1
ditto	68	5 16 6	North Wheal Damsel	40	4
ditto	53	3 18 6	ditto	29	10
ditto	52	3 8 6	Wheal Arthur	56	5
Wheal Maria	80	7 19 6	ditto	10	14
West Caradon	91	9 6 0	Tavy Consols	36	5
ditto	74	10 2 6	ditto	19	7
ditto	65	9 19 6	ditto	10	3
ditto	55	4 16 0	Prideaux Wood	60	3
ditto	8	8 6 0	E. F. & L. Lake Jan.	36	3
ditto	8	27 19 0	Wh. Unity Wood, E.	12	8
Holmbush	107	2 11 6			



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Richard Taylor, Red Lion-court, Fleet-street; and *Mining Journal* office, No. 26, Fleet-street, London.

## Notices to Correspondents.

**THE PORT PHILIP COMPANY, AND EVAN HOPKINS, ESQ.—SIR:** I agree with my brother-adventurers in the value of our superintendent, and think he ought to be as much prized as the Australian Agricultural Company prize their golden plains. For what they already possess, the boundless talent and energy of Evan Hopkins will, undoubtedly, secure yet far richer plains, and a more brilliant harvest for the Port Philip Company.—C. F., Dec. 31.

**"J. F." (Glasgow).**—Quartz may be rendered more friable by calcination, but by crushing by some of the new machinery it might be rendered more available.

**SIR,**—Will any of your intelligent correspondents obligingly instruct me as to what amount of information a registered shareholder of a Cornish mine, having an office in London, may there apply for, and reasonably expect to receive? I know that the weekly reports from the mine may be there inspected; but what I particularly wish to ascertain is, how the days and the amounts of the proposed sales may be previously known? I perceive they are regularly published in the *Mining Journal*, but there I see them only at second-hand, and in common with the public; but, as my dividends depend on the ore sold, and the value of my investment is determined by these sales, I should presume that there should be some means of access to this information for shareholders, at least as early as any other parties. Now, I have not seen in any of the weekly reports from the agent any such notice as above alluded to.—*INQUIRY: London, Dec. 30.*

**NORTH DAMEL.**—"X. Y." is informed that this mine is about half a mile from the western part of the United Mines, and upon parallel level. It was until last year known as West Wheel Jewell, when it was sold at the Auction Mart, to Messrs. T. Field and Francis Pryor, who have continued working it, but as yet have declared no dividend. If our correspondent wishes further information, he must apply at Crown-court, Threadneedle-street.

**TENDY MINN.**—"A Shareholder" wishes to be informed why the committee do not convene general meetings of the shareholders every two months, according to the rules and regulations of the mine?

**"A. O." (Greenwich).**—The principle propounded in the paper on the New Theory of Light, recently read before the Royal Astronomical Society, by Mr. G. F. Harrington, of Portsmouth, contains on a first casual view some startling deductions, but which appear to us, on close investigation, to be wholly untenable. He assumes that the sun does not shine upon us in such manner as to produce daylight in the way we have always supposed, but that what is called "solar light" is produced by its action on certain gas given off by our earth: these, as fast as generated, are forced up through the air by the gravitation of heavier vapours, until they reach the upper limit of our atmosphere, where they are ignited by the sun, producing a luminous flame, called daylight. His view of the prismatic spectrum is that seven gases, giving the seven different colours, are exploded; by no other means can he account for what becomes of the immense quantity generated on the surface of the earth, forgetting that they are being continually reconverted. In fact, the whole theory is so opposed to all our practical experimental knowledge of the laws of nature, that we think it can raise but little discussion.

**"A Shareholder" (Northampton).**—The shares have never been quoted, either officially or otherwise. The company has never had any reputation, and we believe is in course of winding-up.

**MINING AS AN INVESTMENT.**—SIR: Will your correspondent, "Argus," (of Turin), have the goodness to explain whom he means as the "gentry" who represent mines paying 20 to 25 per cent. interest of money? The term, if properly applied, is not to be quarrelled with, but I apprehend that "Argus" puts it forth in an ironical sense. The answer is always useful: it is quite as easy to be courteous as vulgar. Every one who studies the matter knows quite as well as "Argus" that there is no absolute certainty of any mine continuing to pay a given rate of dividend, because all mining must be, more or less, uncertain. In what respect does mining property, well selected, succumb to any other investment? Railways will pay about 3½ per cent. (the best of their average), and the funds 3 per cent. All well managed mines are continually opening new ground. Let "Argus" point out those who do not, and wait the contradiction, instead of a sweeping condemnation like that just ventured upon.—A MINING BROKER: City, Dec. 31.

**"A Miner" (Cambridge).**—The accounts received of individual success at the gold diggings are perfectly true, but no statistics have arrived of the failures.

**RAILWAY BOOK-KEEPING.**—"A."—A system founded on the Italian method, by double entry, long adopted in all large establishments, is used in railway offices. There are plenty of treatises to be obtained at the booksellers; but from the complex nature of the arrangements and vast extent of business done in a peculiar manner, as compared with regular trading, nothing but considerable experience in a railway office can render a person an *admirer* to the subject.

**ANGLO-CALIFORNIAN GOLD MINING COMPANY.**—The 2000 shares allotted at the meeting in January, 1852, were to the original directors of the company. Those gentlemen who are directors of the Alliance Gold Mining Company (with one exception), did not participate in the allotment.

**"A. X." (Regent-street).**—Mr. J. Y. Watson, F.G.S., may be consulted upon any mine mentioned in his Review, published in the *Journal* of last week, on application to him at Messrs. Watson and Cuddell's, No. 1, St. Michael's-alley, Cornhill. The other question of our correspondent we are not in a position to answer at present.

**"W. B." (Tavistock).**—The proper period for giving notice of a meeting is that agreed upon by the adventurers. The pursuer is the proper person to sue, which he may do in any court he pleases, and should be prepared to answer any plea which may be put in justification; the excuse about the meeting not being held precisely at the time is nothing, and cannot avail him.

**BOCARNE MINN.**—"Inquirer" wishes for some information respecting the constitution of this company; having been induced to become a shareholder, he finds that no meeting has ever been held, no accounts submitted to the proprietors, and that no cash-book exists, and that the company is in a state of complete stagnation. The whole of the 15,000l. capital shall be expended in working the mines, while the gross produce of ore, &c., shall be paid in dividends. As we have had other similar inquiries, perhaps some one connected with the management will send a reply.

**"G. S. B." (St. Leonard's).**—The promised scrip of 100l. in lieu of the 150l. paid-up shares, has not yet been issued to the original proprietors of the Asturian Mining Company. We have made some remarks on the conduct of the trustees, which will be found in another column. As far as we know, that is the present position of the company.

**"R. H." (London).**—The best way is to enquire through a respectable broker. The directors of the latter association alluded to are on the board, and have not repudiated their connection with the company, as in the case of the other association referred to; they are men of high standing, and would not willingly lend themselves to a delusion.

**"A. P." (Belgrave).**—Some of the old stock of the Copper Miners' Company was sold at Garraway's a short time since by order of the Court of Chancery, and realised the sum of 9s. in 11.

**GRANT BURN MINN.**—"A Shareholder," who complains of some items charged in the accounts, as presented at the last meeting, should have attended thereat, and made the necessary inquiries respecting them; when, had the explanation not proved sufficient, they would, doubtless, have been disallowed. Having passed, it appears useless to question their propriety; and as auditors are now appointed, there can be no doubt that all will go on well in future.

**"T. B. C." (Liverpool).**—It is our intention shortly to give an account of all the gold which has been entered through the Custom House in the past year.

**In answer to the enquiries of "Britannia Shareholder"** (Barnstable), we can have no hesitation in expressing our conviction that the call made on the Britannia shares, under the present position of the company, is at variance with the true spirit and rules of the Cost-book System, and that shares cannot be forfeited for non-payment of the call. The pursuer has the power to call a general meeting of the shareholders.

**"W. G. J." (Swansea).**—As the pressure of the atmosphere will only sustain a column of water from 33 to 34 ft. high, it naturally follows that fluid cannot be raised from a greater depth by means of the syphon. In practice generally it is, perhaps, hardly safe to depend on a greater depth than 30 ft.

**"S. T." (Bury).**—The office of the Silver Valley and Wheel Brothers Mine, is in Hatton-court, Threadneedle-street, and Mr. W. Lee is the pursuer.

**"J. F." (Whitehaven).**—We are not aware of the mode of preparation of materials employed in the composition mentioned by our correspondent; we have, however, in the course of the past few years inserted in the *Journal* several recipes for lubricating greases, generally for railway use, of undoubted superiority over common oils, &c. We should think the most probable way to obtain the information required would be by an advertisement.

**"A. M. Z."**—The remarks have appeared at different periods during the past four or five years. The back volumes of the *Journal* should be searched for the information.

**THE MINING GUIDE.**—Repeated applications having been made for particulars respecting the locality and offices of the various mining companies, the proprietors of the *Mining Journal* purpose preparing a *MINING GUIDE*, containing the names and addresses of the pursuer, captain, and committee, of each company, to be published as a companion to their *MINING GLOSSARY*. That the *GUIDE* may be perfect, pursuers and secretaries are solicited to furnish the required details, viz.:

Name of mine	Captain
Produce	Committee
Where situated	Secretary
Pursuer	Offices

To which will be added, a LIST of ALL MINING AGENTS and DEALERS in SHARES. The proprietors would feel obliged by the above information being forwarded, or an intimation where it can be procured, to the Editor, *Mining Journal*, No. 26, Fleet-street, London.

**MINING GLOSSARY.**—For the convenience of new adventurers, and others requiring the information, we have prepared a Glossary of English and Foreign Mining and Smelting Terms: it is neatly printed in a useful form, and can be obtained through any bookseller, or at our office, price 2s.

**THE COST-BOOK SYSTEM.**—So much interest being evinced for information respecting the Cost-book System, we have reprinted, as a pamphlet, the paper descriptive of its principles and practice, which appeared in the *Mining Journal*. Copies can be procured through any bookseller or newsmen, or at our office, price 6d.

•• The INDEX and TITLE-PAGE to our TWENTY-SECOND VOLUME will be published with next week's *Journal*. Those of our subscribers who require any particular numbers, to make their sets complete, should make early application. We may take this opportunity of recommending that the *Journal* should be filed weekly, for the purpose of binding at the end of the forthcoming year,—it is then useful for occasional reference, and is carefully preserved,—as we are frequently unable to supply missing copies, and thus some volumes necessarily remain imperfect.  
•• It is particularly requested that all communications may be addressed—  
TO THE EDITOR,  
*Mining Journal* Office,  
26, FLEET-STREET, LONDON.

Post-office orders made payable to Wm. Salmon Mansell, as acting for the proprietors.

THE MINING JOURNAL.  
Railway and Commercial Gazette.

LONDON, JANUARY 1, 1853.

The great results of the EXHIBITION OF THE INDUSTRY OF ALL NATIONS in 1851, ending as they undoubtedly will in the establishment of a permanent museum of inventions and works of art, which may serve as an historical record of the ingenuity of the age, must mainly be attributed to the efforts of the council of the Society of Arts in 1848, when they commenced a series of annual exhibitions of productions of the previous 12 months. Such a museum as is now being established at Sydenham will also show the progress of the past, the direction in which inventive men are working, what has already been accomplished in each separate department of art, and, by a comparison of the efforts of various minds at different periods, will form the best groundwork and guide for future practice.

Encouraged by the success of the first Exhibition, which exceeded the expectations of the most sanguine, it was deemed expedient to continue the course thus commenced, and it is highly gratifying to find that for the present season, which opened on the 15th Dec., and closes on the 31st inst., shows a progressive improvement. The present Exhibition contains a collection of articles invented, patented, and registered since Oct., 1851. The catalogue contains a list of 190 exhibitors in the mechanical arts, many of which promise to be of great public utility, and have been noticed in the *MINING JOURNAL* during the past year. Among these we may notice a

ROTATIVE ELECTRO-MAGNETIC ENGINE (by M. FROMENT), in which each magnet begins to act when the keeper is nearly close to it. The keepers are brought into position by an eccentric motion, by which means the great loss of power that generally takes place in these machines is said to be avoided. GALVANIC APPARATUS WITH CONSTANT BATTERY (R. WEARE), the battery of which is said to be permanent, and the power to increase the longer it is at work. The power is regulated by a fixed scale.

FENDER FOR RAILWAY CARRIAGES (A. T. FORDER), to prevent injury in cases of collision, by absorbing the power in the distribution of steel plates by means of corresponding metal rods.

GOLD WASHING MACHINES.—Of these there are four, by T. STARKEY, F. BARNES, RICHARDS, and LYON. They are several ingenious and practical in operation. The real value of either of which must, of course, be proved in practice.

MINERS' SAFETY-LAMPS.—Of these there are also several by SIMONS, WATSON, and THORNTON, which we have fully noticed before. In one modification of SIMONS's lamp, an attempt to open it immediately extinguishes the light, and it can be fixed to the front of the miner's cap.

Among the philosophical instruments, we noticed a deviation compass, by Capt. WALKER, R.N.—the object of which is to obviate or neutralise the defects of the existing compass, and to produce an instrument capable of indicating the course of a vessel with correctness, both in fair and foul weather, and when under the agitation arising from either internal or external causes.

A very beautiful apparatus is exhibited by M. FROMENT, illustrating the rotation of the earth, exemplifying the pendulum experiment of M. FOUCAULT. An altimeter, by FONTAINE MOREAU, for measuring accessible and inaccessible heights by very simple calculations, and which may be carried in the pocket.

In locks there are some recent improvements by HOBBS and PARNELL, stated to bid defiance to picking; and the numerous other articles in agriculture, hardware, navigation, and for miscellaneous uses, give a gratifying view of the progress in the arts made since the close of the Great Exhibition. It is clear that these annual revivals, bringing into a focus the results of inventive genius of the previous year, have been productive of vast public good; and while we would allow great merit to the council for the persevering efforts they have made to bring the proposal to a successful issue, we cannot, in justice, omit the name of FRANCIS WHITAW, with whom the idea undoubtedly originated, and to whose exertions and inquiries the council are indebted for the principal portions of the data on which the whole fabric was erected.

Our readers may remember a statement we put forward last week from our correspondent in Madrid, stating that M. PAILLETTE, the manager for the Duke of RIANZABES of the property formerly belonging to the Asturian Mining Company, had promised a small dividend in June next—that they were now making 6 tons of iron daily, and shortly hoped to increase the make to 10 tons. It is with regret we are induced to make any remarks on this ill-fated association, but justice to the unfortunate British shareholders will not allow us to be silent. The causes of the original failure of the association we do not wish now to enter into, neither its subsequent phases while under the liquidation. When the liquidators were ejected, the so-called trustees promised in August, 1851, that if those shareholders who had paid up 150l. would accept one-half their interest (viz. 75l. 10s.) they should have in the new concern, in the October following, 100 shares to the extent of their then remaining interest. From that period to the present time they have received no further information, or the shares which they bargained for. From what cause this has arisen the trustees have never condescended to explain, and all remains in *tenebris*. After expending over 200,000l., surely some explanation, if nothing else, is due to those who have invested their money, and afterwards relinquished a large portion of their interest on the faith of the trustees. Have these gentlemen any agreement with the agents of the Duke of RIANZABES? If so, have they fulfilled the stipulations they entered into? Surely this should be inquired into. The situation of the shareholders at present is so bad that it can hardly be worse; under all circumstances, it would be better for them to know what they have to expect. To attain this object a public meeting should be summoned, and the case honestly and fearlessly laid before the shareholders. If the trustees have been duped let them acknowledge it; they will then be considered less culpable than if they have received money, and withheld it from their constituents. We candidly state we know not in what position they are, but we reiterate it is due not only to their constituents, but to their own character, to come forward, and by a lucid statement of facts dispel the doubts that are already engendered, and vindicate themselves from the suspicion which is thrown on their character by the dilatoriness of their movements, and the absence of information of any kind whatever.

The evidence given at the Coroner's Inquest on Wednesday, at Harrow, on the body of JOHN BARTHOLOMEW, the guard who was killed by the late accident to the Liverpool and Manchester express train, demonstrates in the clearest manner the extreme care and caution exercised in the construction of the works and machinery by the London and North Western Company, and that every means within reach of the executive are employed for the safety of the lives and limbs of passengers, and the security of the railway property. It is too much the custom to assert the contrary; but although certainly many cases of recklessness have been brought before the public, we think the balance is in favour of the officials generally. The proceedings, upon the whole, were highly interesting; and such inquiries must greatly tend to circulate the most useful information on the subject of railway construction, and, consequently, to the decrease in the number of those unhappy and fatal accidents.

It appears the accident occurred from the breaking of a tyre, through inefficient welding; and, previous to the inquiry being entered upon, an experiment was made before the coroner and jury, to test the strength of the iron of the broken tyre. It had considerably opened, and was placed securely in a groove, when a "monkey," weighing 18 cwt., was raised by means of a triangle to a height of 7 ft., each foot being equal to a ton in addition. It was then let fall, and the effect was to close the aperture, measuring 30 in., 5 in. From a height of 20 ft., the opening closed 7½ in. more, but no fracture took place; a piece was then separated by nicking, and the metal presented the most beautiful and fibrous appearance. Mr. EDWIN CLARKE was deputed to examine the iron, and gave

his opinion that the accident occurred from defective welding. Mr. SHARPE, of the firm of SHARPE, BROTHERS, AND CO., Manchester, said, that out of 730 locomotive engines which they had manufactured, he had known only three instances of fractures of tyres. The evidence of Mr. MCCONNELL and CAPTAIN HUISE showed the vast extent of the company's works at Wolverton and elsewhere; they weld 3000 tyres a-year; there are 30,000 tyres at work of their own welding; and witness had only known of one fracture during six years' experience; they had 60,000 tyres on hand. CAPTAIN HUISE, in alluding to remarks which had been made as to more accidents having happened on their line than on any other, said, the only answer necessary was, that the London and North Western Railway was three times the length of any other, and it was natural that its accidents should be the most numerous. There were 11,000 servants in the company's employment, upon whose conduct the safety of the public in some degree depended, and it was impossible to prevent occasional accidents. During the past six months, from bad weather and other causes, such as the failure of bridges and roads, they had had greater difficulties to contend against than he had known in 15 years' experience; but he was happy to say these causes had now subsided, and matters were daily improving. The coroner gave the general management great credit for forethought, care, and prudence; and it was a remarkable fact, that during 12 years he had never held an inquest on a first-class passenger; but two or three each of second and third; and he should be very glad if the company would pad the second and third-class carriages, if with ever so rough a material, as, in cases of accident, the head coming in contact with the hard boards, frequently caused death. CAPTAIN HUISE said he would lay the suggestion before the board. The jury returned a verdict of "Accidental Death," and recommended a better system of testing the welded parts of tyres.

In another column will be found a report of the meeting of the ELECTRIC TELEGRAPH COMPANY OF IRELAND, held on Monday. From this it will be seen that this important company, who have the privilege of laying down lines in Scotland and Ireland, are favourably progressing, and had it not have been for the unfavourable state of the weather, which in a great measure has retarded operations, would ere this have placed us in direct and continuous communication with the Sister Isle. The Admiralty agents have borne testimony to the efficacy with which the operations have been hitherto carried out, and no failure has yet arisen or likely to occur. The original intention of the company was to have been incorporated by Royal Charter, but as this probably might limit the sphere of their operations, they have thought fit to apply for an Act of Parliament, which, while at the same time it limits the liabilities of the shareholders, will give them further and increased power. The present capital is 40,000l., and though sufficient is subscribed to carry out the present objects of the company, a power is reserved to them to increase it to 200,000l. if they deem it expedient. The annual meetings are to be held the first Thursday in June, and stringent provisions are introduced both for the government of the company and the efficient service to be rendered to the public. The bill was lodged on the 29th of December, and from the cursory glance we have obtained of its clauses, and knowing the important objects it has in view, we are of opinion that whatever ministry may be at the head of affairs, that every facility will be afforded for furthering this useful and national project. It was shown at the meeting that as soon as one branch of the line was in operation, a fair dividend would be declared; the future profits of the company naturally, in a great measure, would depend on the magnitude of their operations, and these, as soon as the communication is laid down and opened, will necessarily be so large from the extended intercourse, that present calculation must be considered futile, and only calculated to mislead.

Railroads and the facilities of steam have done much for civilization; electricity is yet in its infancy, and we know not what mighty results may arise from its application. The Electric Telegraph Company of Ireland, while affording remunerative returns to the shareholders, will be conferring a national benefit, when by their means the two islands are so united that a facile and instantaneous interchange of communication may constantly take place; and this will do more to heal party differences than any of the panaceas which have hitherto been ineffectual, and given rise to the remark that Ireland is England's difficulty.

Although we do not wish to enter into a controversy, or in any way encourage it, yet a spirit of fairness obliges us to insert the letter of a "Holder of a Thousand Shares," in reply to the communication of "A. B.," which appeared in our columns a fortnight since, regarding the issue of shares in the ANGLO-CALIFORNIAN GOLD MINING COMPANY. The facts are there so briefly and honestly answered, that it would be bootless further to refer to them. "A. B." complains that he did not receive the number of new shares which he ought to have done according to the quota he previously held, and at the same time complains that the directors of this company are likewise concerned with another in California, when they should have been devoting the whole of their energies to the interests of the Anglo-Californian Company. When we consider that for their attendance, as stated by Dr. BARTLEY at the Anglo-Californian meeting, in October last, that for about six hours' labour the directors had received the munificent remuneration of 4s. 9d. for each attendance, which was not contradicted by any one there, and must be assumed to be true, we would ask "A. B." if this is the only pursuit he would confine these gentlemen to? Moreover, on that day the individuals in question all retired, and were unanimously re-elected. Where was "A. B.?" Was he so neglectful of his interests that he did not propose to eject those whom he complains of? The meeting was open, the representatives of the press were there, and he would have been protected in any sensible motion he would have brought forward. Having the means in his own hands, he might have made a proposition which, if seconded, would have excluded these men who were giving their attention to another company, and probably a rival. But, *mirabile dictu*, he applies for further shares, issued at a premium in a company, in the board of which these delinquent directors are sitting. They issue the shares *pro rata*. He does not get what he asks for—*hinc illa lacryma*; further comments useless. Can inconsistency go further?

The voluminous information contained in the columns of the *MINING JOURNAL* of this day, respecting our Australian colonies, will be found of the most interesting, not to say astounding, character. The masses at the gold fields are daily increasing; every hour appears to add to the quantities of the precious metal pouring into Sydney, Melbourne, and Adelaide; while those cities and the surrounding localities are well nigh emptied of their male population. Labour has deserted the rural districts; and all the necessary agrarian operations, particularly so important at the date of the last advices, appear to have stood no chance of being accomplished. The mining and smelting establishments were temporarily at a stand-still; the Burra Burra Company alone could have found employment for at least 1000 men; nor was there, apparently, the slightest hope of any amelioration of these untoward circumstances, at least during the summer months, a period probably extending over half a year.

The nineteenth century has, indeed, been remarkable for invention, improvement, and discovery; and the present extraordinary position of Australia, as one of England's most valuable possessions, will form an important era in the world's history. With capabilities for the support of an increasing population of the highest order, and quite equal to any other country on the globe, for the greater portion of a century she has been made the sink, in which to pour the refuse of the mother country, and has thus been degraded and demoralised in the eyes of the world by a convict population. The establishment of the colony of South Australia in 1836, under stipulations that no convicts should be sent there, gave a great stimulus to immigration, and the development of more extended, and the most prolific portion of the country; and now, at a moment when in England we are treading on each others' heels, where millions are fed sparingly from hand to mouth, and the Irish peasant still finds but a precarious existence, she is found to be rich in the precious metal, gold, and its wants increase, nature is always at hand to supply them. The most exciting inducements are held out to reach the shores of this new Paeotus; thousands have gone from hence, thousands are still going; but the re is ample room, with certainty of plenty for all, for thousands upon thousands more; and it is the duty of a paternal Government to establish a comprehensive scheme of emigration, to enable large bodies of the able-bodied, industrious, and moral portion of the labouring population to reach these colonies, who have no other means of accomplishing such an event. Australia cries aloud for labour—she is in a state of paralysis for



ment of it; and, while it would regenerate and invigorate her impulses every vein, an extensive emigration from this country would ease our burdens here, give additional employment, food, and comfort to those remaining, and tend to the increased prosperity of both countries.

We would briefly call attention to the principal points in the advice under notice, and it will be seen that the total amount of gold brought to Melbourne, up to the end of August, was 1,771,974 ozs., which by the end of September was increased by 366,193 ozs. According to the present weekly yield, which is estimated at about 80,000 ozs., the gross annual sum will be about 14,500,000l.—an enormous amount, more particularly when we consider that, from all appearances, even in localities at present known, the source of supply appears inexhaustible; while there are hundreds of square miles still untrodden, probably as rich; and it is more likely to increase than otherwise. Our South Australian correspondence will be found more than usually interesting, but, we regret to say, painfully so. Adelaide at this moment represents a "Deserted Village," those who do remain, no doubt the largest proportion females, must be suffering innumerable inconveniences, privation, and much misery; and what renders the matter worse is, that it is impossible to foresee when such a state of things will end. In the rural districts the cultivators of the soil were apparently in an equally unenviable, if not still more-to-be-lamented predicament; the waving crops were waiting for the sickle in vain; there were none to clip the wool, likely to rot on the sheep's backs, and, even could that have been accomplished, no carriers to take it to the shipping port; thousands of labourers could have found, and still can find, profitable employment; and we sincerely trust that Government will make an energetic move, and take such measures that thousands may be sent.

With reference to the report of the meeting of the Australian Mining Company, in another column, it is gratifying to be able in some degree to turn to a bright side of the picture; a voluminous and able report from Captain HIRSHMAN, who has recently returned from a survey and thorough inspection of that company's property, has lain some time in the office; from which it appears there is every reasonable prospect of future prosperity. Under former managements, both of the surface and the mineral lands, great neglect, extravagance, and error, have been committed. The Tungillo Mine really appears, after all, to be a valuable one, with much iron ore in sight, and only waiting an addition to the labour market, to bring to surface; they are within seven miles of the so-far-discovered gold fields, and possessing ample crushing machinery, are at once prepared to crush auriferous quartz, should such business become eligible. The expenses are reduced to the lowest possible limits; and they have sufficient funds in hand to carry on all operations at present contemplated. The report of the directors, of course principally founded on that of Captain HIRSHMAN, gave great satisfaction; and the large number of shareholders, most of whom, at the former meeting, looked most gloomily at the aspect of affairs, went away with the cheering hope that they should yet get a considerable and permanent return for their investments.

It is but seldom we treat on matters put before the public in the shape of mining adventures, but so prolific have they become of late, that, with the close of the year, or, rather, the advent of that at hand, we deem it only an act of prudence to direct attention to our Share List. It will be found therein that there are some 500 or 600 companies, one-fifth of which, we readily admit, have realised large dividends at a comparatively slight cost; while, on the other hand, some 200 or more have embarked vast amounts, have sold ores, but never realised a profit, of which, however, many hold out good promise; while the remaining 250, being either new mines or old sets taken up, are to be looked upon with caution and inquiry; for although the present standard is such as to justify the working of ground hitherto held as valueless, yet no certainty can be assured of the advance or of the influx of foreign ores in the next 12 months; while, if the capital embarked on the new projects be at all profitable, we may well expect an addition of 50 per cent. on our returns, it being understood that no retrograde movement takes place in our present "producing" mines.

Judging from the encouraging prospects held out by the projects which daily present themselves, ample profits will be the result of the capital so employed, aided by energy, perseverance, and last, but not least, honest management. It, however, does in our opinion behoove the capitalist and adventurer well to consider in what mine he embarks, what are its prospects, and who are the parties with whom he becomes connected; and, moreover, let him feel, without accounts be duly furnished, the responsibility which he imposes on himself, in so being connected with a mine adventure. It may, and doubtless will be said, that instead of advocating or upholding mining enterprise, we are, by our remarks, tending to deter it; but we feel well assured that every honest miner and well-intentioned adventurer will give us credit for the motive which prompts us, at this early season of the year, to give the results of past experience.

There can, we believe, be no question that, of many of the companies formed with thousands of shares, were an inquiry instituted, it would be found that but a moiety—aye, even a paucity—were held by the public; the remainder, say even a third or a half, being reserved by the promoters, without any payment. In fact, we have only to cite two cases in the Sister Isle, where the one company, or body of directors, takes 50,000l. out of 60,000l. capital, the other 50,000l. out of 100,000l., neither of whom have, we verily believe, expended 1000l. Without, however, naming A. or B., we would suggest to the capitalist and the mine adventurer to be somewhat cautious in embarking in mining pursuits, without first availing himself of the aid of those who, practically acquainted with mining enterprise, its "ups and downs," and the prospects which enterprises, however "flowery" the language holds forth, may present. There are many honest, scientific, and practical miners, whose opinions may be readily acquired; and we would again suggest such should be availed of, when opportunity admits. In saying thus much, we feel assured that we shall not only have the good wishes and thanks of the honest miner, but of all those to whom we are so much indebted for the position in which we stand, and of which it is our pride to boast.

In another column will be found a report of a numerous and influential meeting at Helston, for the purpose of taking into consideration the propriety of expressing the confidence of the public in the character and prospects of the GREAT WHEEL FOR UNITED MINES, and to manifest a desire to afford the undertaking cordial support. The meeting was unanimous in their expression of confidence in the capabilities of the property. It is gratifying to find that so valuable an undertaking has been entirely relieved from any connection whatever with the litigation of former years; and we look forward to see this adventure take its proper position in the mining world.

[FROM A CORRESPONDENT.]

A detail of the first principles of law within which the Cost-book System is placed by our most authoritative jurists, may tend in no small degree to render our notions upon that subject clearer and more exact. Our readers are aware that the whole municipal law of England is commonly divided into two kinds—namely, the *lex scripta* (or written or statute law), and the *lex non scripta* (the unwritten or common law), or more properly the *ius quod constat ex scripto* and *ex non scripto*.

Now, it is indisputable that the Cost-book System does not owe its origin to a *lex*, for such assumes a commencement by writing—that is, that the system became a legal fact by virtue of some written instrument, wherein its terms are detailed. That there is no such instrument is by all implicitly admitted, for if such existed its terms, if intelligible and sufficient, would have obviated all that difference of opinion entertained by several of our distinguished contributors. The Cost-book System is not a *lex*.

Not being a *lex*, it must (if a legal fact, or a binding rule of civil conduct, which all admit by the fact of discussing its merits and extent) be within the category of those *jura quæ constant ex non scripto*, which embrace not only the customs general to all the inhabitants of this kingdom, or the "common law," properly so called, but also the customs particular to certain parts of the kingdom, and likewise those particular laws that are by custom observed only in certain courts and jurisdictions. Of these three, jurists under the particular laws lastly referred to place the Roman and canon laws, and those jurisdictions which restrictively decide in accordance with those laws.

As it is not contended that the Cost-book Principle is the offspring of either the Roman or canon law, it, to be law, must be within either the first or second of *jura quæ constant ex non scripto*. Indeed, the whole *veritas questio* is, that the system by the Cornish men is said to be within the second category—that is, a *local custom*; whilst the rest of the mining community state it to be within the first—that is, *common* to all the inha-

bitants of the kingdom. Now, as the system exists as a legal fact, it is not *prima facie* a particular custom; also, as it has not, as we maintained in our impression of the 11th Dec., a feature in derogation of any principle of the common law, so it is open to the adoption not only of all mining but other trading communities. It would, however, require too much of our present space to detail all the arguments and data on the one hand incontestably to show that it is not a local custom, and on the other that it forms part of the law common to all the inhabitants of these realms. We, therefore, for the present, state our conclusions without the argument, and assert that the Cost-book System is part and parcel of the common and general law of this land, and not local or proper to the Stannaries' jurisdiction, for that as in its obligations it is not confined to a particular district, so it cannot, with propriety, be considered as a *custom* in the technical, legal, and proper sense of that term.

We are happy to be enabled to remove some little misapprehension which appears to have arisen with regard to the registration of the shares of the SOUTH AUSTRALIAN COFFEE MINING COMPANY. An advertisement put forth during the past week, requesting that their shares may be presented at the office, so that their numbers only may be taken, in order to enable the directors to distribute the few remaining unallotted shares, at par, amongst the present fortunate holders, and further to divide amongst them a bonus which has accrued from the sale of shares at a premium, has given rise to an idea that complete registration is intended. Such is not the case; and an official letter written by the chairman to the brokers of the company, and by them posted in the Stock Exchange on Wednesday last, fully sets this matter at rest. It is to the effect that nothing more than the numbers of the certificates is required, that no deed or signature is necessary, and that the shares will continue to pass as freely from hand to hand as at present, not requiring any transfer whatever. Without this calling in it would, of course, be utterly impossible to divide either bonus or unallotted shares; and as a bonus is already in hand, and a dividend shortly expected from the arrival of the 250 tons of ore, ordered in June last to be shipped for England, the necessity for an account to be taken of the shares must be apparent. This has been purposely contrived, so as not to occasion the least inconvenience to the holders; and we cannot but congratulate them upon the necessity for such a step, which bespeaks the near approach of a return for their investment. In fact, from the large extent of freehold property actually held by this company being within 10 miles of the gold field recently discovered on the Onkaparinga, it is fully expected that this tract of land forms a part of the same gold-field.

### THE IRON TRADE.

[FROM OUR CORRESPONDENT AT BIRMINGHAM.]

DEC. 30.—The anxiously-desired preliminary meeting of the iron and coal masters of South Staffordshire and Shropshire, held this afternoon, at the Swan Hotel, Dudley, was most numerous and influentially attended. All the large firms were represented, there being amongst others present the following gentlemen:—M. Grazebrook, Esq., chairman, William Mathews, Esq., W. Williams, Esq., B. Williams, Esq., W. Forster, Esq., Job Haines, Esq., Messrs. Smith, Barrows, Browning, Sparrow, &c. The business commenced at three o'clock, and continued until four. The proceedings, of course, were strictly private, but at the conclusion, I was favoured with the following results:—"Advance of 20s. per ton, and an advance of the wages of the workmen in proportion." There was not a list of prices quoted, nor do I believe an accurate list could well be given, for although an advance of 20s. has been declared, a still greater advance may be in many instances required and obtained.

By many extensive manufacturers, who are deeply engaged in supplying foreign orders for made goods, the decision of to-day will be held to be highly injurious; whilst on the other hand, the orders in the master's books from other quarters are said to be so extensive as to fully justify the advance. In anticipation of to-day's meeting, a letter received last week by one of the most respectable and extensive merchants in Birmingham, from an equally respectable firm in Glasgow, was published in one of our local journals on Saturday, evidently with a view of pointing out the injurious results likely to follow from a further advance of iron. The writer confidently asserted that the present high prices were not the result of a greater consumption than the powers of production; and after giving some statistical information in support of his opinion, attributed the present extraordinary state of the market to the operation of English capitalists, who are said to be in possession of the large stocks of Scotch iron. This, *exposed*, at it was considered, was deemed likely to prevent the result of that day's meeting, if not to have led to a reduction upon the declared prices of last quarter. Such, however, has not been the case; and the most recent reports from the entire district are of the most flattering description. The principal drawback upon the iron trade is the deficiency of coal; for although nearly 1000 tons a-day arrive in Staffordshire from Derbyshire by the Staffordshire Railway, and quickly distributed amongst the large works, the supply is still infinitely below the requirement, and the prices are advancing. Another rise of 2s. per ton has been declared this week upon coal and lumps, making the price of best coal, at the pit's mouth, 13s.; common and furnace, 11s., and lumps, 10s. This is 1s. per ton more than when the colliers had 5s. per day, in the years 1845-6-7. Next in importance to the advance upon the price of iron to-day is the unexpected advance of 44 10s. per ton which has just been declared upon the price of tin, and which I can have no hesitation whatever in saying will most materially affect many manufacturers.

The following trade list has been circulated since the 27th amongst the customers of one of the largest houses in the trade:—"An alteration has been this day made in the prices of tin, of which we beg to inform you. Tin, in blocks, 103s. per cwt.; tin, in ingots, 103s. 6d.; in bars, 105s.; refined, in blocks, 106s.; plate, grain, 110s.; fine granulated, 125s. per cwt." And in addition to the above advance discounts have been reduced from 14 to 1 upon the long credit, and from 24 to 2 upon cash transactions. A scarcity of the article is also reported, which by some is attributed to the operation of large capitalists rather than any actual deficiency. The consumption, however, for Australia has been unprecedented, and the demand for manufactured articles for that colony may in no small degree, if not entirely, account for the present state of the trade. In addition to the above important advances upon iron and tin, an advance is daily expected to take place on copper, and considerable uneasiness is in consequence felt throughout the trade. Of the scarcity of this article there can be, I fear, little doubt, and added to this, the alleged small profit of the smelters constitutes the ground for the contemplated advance. The following prices were quoted to me to-day by the largest house in the trade in Birmingham:—The copper, 1037 10s. per ton; best selected, 1067 10s.; other qualities ranging accordingly; strong sheets, 114d. per lb. Under the above circumstances, although they present, on the whole, a sound state of commerce, so far as abundant orders and advancing prices can be taken as an index, there is, nevertheless, a good deal of anxiety and doubt as to the future; and doubts are, perhaps, not unreasonably entertained as to the final results of such an unusual state of things. Every mine in the district that can be set in motion now finds a capitalist to work it, and speculation is now actively engaged in this district with respect to mines as a distance. Some excellent samples of iron ore from a new mine said to be discovered in Wales have been privately exhibited within the last few days, and large offers are said to have been made for the property. The general trade of this town is good, workmen are fully employed, and in some branches, particularly in the glass trade, are making overtime.

### ACCIDENTS IN MINES.

Half-yearly statement of accidental deaths in the North of England (Durham, Northumberland, and Cumberland) coal mining district, from November, 1850, to and with 31st December, 1852:—

	Deaths in shafts.	Explosions.	Choke damp.	Falls of stone.	Dries.	Total.
1851—June 30, eight months....	13	8	1	21	29	72
Dec. 31, six months.....	3	49	0	15	19	88
1852—June 30, six months.....	17	33	1	19	27	97
Dec. 31, six months.....	10	4	0	26	16	56

MATT. DUNN: Mine Inspector.

PREVENTION OF INCrustation IN BOILERS.—Mr. Overman recommends to use charcoal to prevent incrustations in boilers. That made from hard wood is preferred, and is to be broken up into lumps from 4 to 4½ in. cube, and then thrown into the boiler, in the proportion of two bushels to a boiler of 20 or 30 horse-power. At the end of a month it will require to be renewed. It is said not to condense the salts of fixed alkalies, as those of potash and soda, but will effectually absorb all salt of lime, alkaline earth, salts of iron, and almost all other heavy metals.

### THE MINING GUIDE.

We now particularly direct the attention of parties concerned to the information we require for the MINING GUIDE:—

Name of Mine.  
Produce.  
Where situated.  
Purser.

Captain.  
Committee.  
Secretary.  
Office.

And the NAMES AND ADDRESSES of all MINING AGENTS AND DEALERS IN SHARES.

As the MINING GUIDE will be published within a month, it is hoped the necessary particulars will be furnished with as little delay as possible.

The object of the MINING GUIDE is to afford a means of communication between inventors and others, with parties connected with the working and management of mines, to introduce manufactures applicable to mining purposes, acquire information, &c.

### LIST OF PATENTS COMPLETED UNDER THE NEW LAW.

J. Macmillan Dunlop, Manchester—Manufacture of wheels for carriages.  
A. Campbell Duncan, Glasgow—Improvements in the art or process of dyeing cotton, or other textile fabrics, or cotton with other yarns, when printed or mordanted with the colouring matter of madder, or of dyo-woods, and in machinery or apparatus employed therein.  
E. Pett, Kingsland, and J. Forsyth, of Calbeck, Cumberland—Improvements in spinning and drawing cotton and other fibrous substances, and machinery for that purpose.  
E. Lloyd, Dee Valley, near Corwen, Merionethshire—Improvements in steam-engines, the whole or part of which are applicable to other motive engines.  
J. Wormald, Manchester—Machinery or apparatus for roving, spinning, and doubling cotton, wool, or other fibrous substances.  
J. Lavater, of Grenelle St. Honoré, Paris—Improvements in the apparatus for measuring the inclination of plane surfaces and angles formed or to be formed thereon.

### PATENTS SEALED UNDER THE OLD LAW, SINCE THE LAST LIST.

W. E. Newton—Steam and other gauges.  
R. A. Brooman—Mowing, cutting, and reaping machines.  
W. Ricardo—Gas burners.  
T. Carter—Propelling.  
J. Field—Transferring and printing.  
W. Brown—Preparing and spinning fibrous materials.  
A. V. Newton—Railway chairs.  
J. Pailin and R. W. Slevier—Brewing, &c.  
W. E. Newton—(1) Sewing apparatus, (2) Registering apparatus for carriages.  
E. H. Jackson—Artificial light and motive power.  
E. B. Bright and C. T. Bright—Telegraphic communications and apparatus.  
W. Reid—Electric telegraphs.  
W. Boggett and G. B. Pettitt—Obtaining and applying heat and light.  
J. C. Wilson—Manufacture of flax and other fibrous vegetable substances.  
R. McGavin—Manufacture of iron for ship-building.  
H. N. S. Shrapnel—Extracting gold and other metals from earths or minerals.  
J. Lamb and J. Mendeney—Kilns, and generation of steam.  
J. Walker—Treating cotton-seeds, and distillation.  
P. M'Anaspie—Cement, and similar compositions, for building purposes.  
J. Crowther—Hydraulic crane or engine, motive power, and loading and unloading.  
L. Arnier—Steam-boilers.  
T. P. L. de Fontaine Moreau—Articles of dress.  
C. Liddell—Electric telegraphs.  
J. Weems—Metallic pipes and sheets.  
A. Fulton—Hats, and coverings for the head.  
W. Pettitt—Obtaining and applying electric currents, refining certain metals, production of metallic solutions and certain acids.  
A. E. L. Bellford—Springs for railway and other carriages.  
M. Poole—Elastic sticks or pieces for umbrellas, parasols, and other articles where wholeness is now employed.  
L. Pocock—Rendering sea and other water pure.  
P. S. Lemalle—Preservation of japanned leather.

THE IMPROVED HYDRAULIC SYPHON.—In the *Mining Journal* of the 9th Oct. last, we inserted a communication from Mr. F. C. Moutis, descriptive of the principles of his new hydraulic siphon, and the advantages to be obtained by its use over the general system employed for raising water. We have now before us a diagram of the means of constructing the siphons, and placing them in position for raising water to any height, or from any depth, that may be required, and the advantages assumed by the patentee are evident. The principle is that the water is not lifted in one upright pipe, but raised by a succession of tubes (say 30 ft. each) with an emptying cylinder and valves, on the principle of the force-pump. One continuous piston-rod runs through the whole, passing through stuffing-boxes, and carrying a piston in each tube, and a continuous stream is thus continued on the application of motive-power. The valves are of peculiar construction, entirely free from friction, and the cylinder being only of the same diameter as the tubes, instead of twice the diameter as at present generally in use, there is an avoidance of a cost of power from this source alone four times as great on the part of the atmosphere as that of the piston. In raising water from deep mines, the inventor estimates a saving of power equal to 100 tons, at a depth of 300 feet, and for obtaining a motive-power for turning machinery, a siphon with a double cylinder may be applied, and the water may be returned from the buckets if required, to make good the supply. The usual high pressure on the pipes is avoided, and the whole system appears to be based on sound hydraulic principles.

CONVERSION OF ROTARY INTO RECTILINEAR MOTION.—Mr. A. Carson, of New York, has patented a novel plan for converting any rotary motion into a reciprocating rectilinear movement. In place of the cross head attached to the piston rod, slotted or forked rods are let into grooves in the periphery of the pulley, and connected thereto by three chains, two of which connect with each rod on opposite sides, and pass in one direction round the pulley; while the third connects each rod within the slot or fork, and passes in the opposite direction round the pulley.

NEW SPECIES OF LOCOMOTION.—*Galignani* informs us that recently, on the esplanade near the church of St. Vincent de Paule, a small carriage, containing two men, was seen moving about with the utmost facility, in every direction, without the aid of horses. The motive power was air, compressed by means sufficiently economical to allow its employment in most of the cases in which steam is now used.

GOLD FROM AUSTRALIA.—According to returns which have been forwarded to us, we find that from November, 1851, until the present time, there has entered through the Custom House from the Australian colonies, 1,784,444 ozs. of gold, in addition to seven boxes, value not ascertained. This does not include amounts brought over by private individuals, or the supply by the *Morveo Polo*, lately arrived at Liverpool, which was estimated at 100,000l.; this has been converted in 95 vessels. The largest quantity was brought by the *Eagle* from Port Philip, which arrived here on the 20th of November, and amounted to 150,000 ozs.; the *Lady Flora*, arrived on the 22d ult., brought 77,559 ozs. The smallest amount was by the *Bolivar*, which entered the 10th of April last from Sydney, with only 50 ozs. On Thursday evening, her Majesty's ship *Plumper* arrived at Portsmouth with 20 packages of gold, valued at 50,000l.; this was transferred from the barque *Empero*, which put into Monte Video from Port Philip in a leaky state for repairs.

THE ORIGINAL DISCOVERER OF GOLD IN AUSTRALIA.—A communication has reached us from Bathurst, relative to the dispute still being carried on as to the right of Mr. Hargraves claiming to be the original discoverer of the existence of gold in Australia. It appears that a speech had been made in Sydney by a Dr. Macchattie, in which he accused certain parties of attempting to rob Mr. Hargraves of the credit of the announcement, and that he had ample proofs at hand by which he could rebut his adversaries. To this Messrs. James Tom, William Tom, jun., and J. H. A. Lister reply that he is at least only one of the discoverers; for that when on his way to Wellington he was met at Guyong by Lister, who joined with him as a colleague, and accompanied him to Ophir, which journey resulted in the first discovery of gold in Australia—that he received his fourth of some gold procured in his absence, and in some documents written by him he acknowledged himself a colleague—that even the horse he rode when prospecting was furnished by Lister—that they made the first cradle for their joint use, and were the first who prospected the Turon River, and proved its auriferous value. They further challenge Mr. Hargraves or his friend to disprove their allegations.

COSTA RICA.—We have received a communication from this promising country, which we have no doubt will prove of much interest to those connected with its settlement or colonization. The present population amounts to 200,000 souls, of industrious and pacific habits. It contains immense tracts of fertile and well-watered lands, uncultivated for want of labourers. The climate varies much in character and temperature, but is generally healthy. The soil produces coffee, sugar, indigo, cochineal, tobacco, and many other appreciable fruits; but the natives have devoted themselves with perseverance to the cultivation of coffee, the quality of which is well known in the English market, as well as in Valparaiso and California, to which ports there is an annual exportation of 150,000 quintals, and it may be fairly calculated that this quantity will be doubled before three years, on account of new and extensive plantations now in progress of that article. The consumption of imported goods amounts to \$1,000,000 annually, consisting of cotton fabrics, and hardware of various qualities. There is full religious toleration, and great need of scientific professors and institutions, particularly for the education of females. The country is, however, progressing rapidly; and when the communication with the Atlantic is complete, an extraordinary increase of the population will doubtless ensue from European emigration; but all industrious and persevering people may even now find lucrative employment.

STRUVE'S MINE VENTILATOR.—We have had to refer, on several previous occasions, to this important apparatus for colliery ventilation. Messrs. Ford and Sons have arranged with Mr. W. P. Struve, of Swansea, who is the inventor, to put up one of his ventilators, consisting of ten 16-ft. cylinders, at their extensive colliery, on Mr. Talbot's estate, near Bridgend; this makes the fifth ventilator which has been ordered this year, and the sixth which has been adopted in the principality.

PRIGNANT CONSOLS SILVER-LEAD MINING COMPANY.—A prospectus has just been issued by this company, formed for working a portion of the great Fromgoch lode, which branches off into two portions, and runs through the Prigant grant. From a report of Mr. Matthew Francis, it appears, in addition to this lode, they have those of the Bodcol and Llanneithen Mines, which to the east have made a great deal of ore. The estate is situated in the parish of Llanfihangel Croydon, about one mile south of the Devil's Bridge, two from Logyias, and one from Fromgoch, and is expected by experienced miners to become one of the standard mines of the county. The sett is held under a "take note," with an agreement for lease from the Rev. W. H. Morris, at dues (low for Wales) of 1-14th. The company is divided into 12,000 shares, of 1l. each, half of which will be issued to the public, the present proprietors reserving 6000 for obtaining and proving the value of the grant. It has been carefully estimated that 3000l. will be ample to fully develop the mine.



OBSERVATIONS ON CERTAIN TIN STREAM WORKS IN THE COUNTY OF CORNWALL.—No. III.

BY GEORGE HENWOOD, ESQ.

No vestige of gold, I believe, was observed here during the last workings, nor are there any traditions of its having been found there formerly, which in all probability would have been the case had any been found, for in Cornwall traditions are as plentiful as in Wales, and quite as much respected; indeed, until the time of the learned Boscawen, who may be styled the Thoreby of the county, there was no history of localities extant. Had gold been discovered it would certainly have left the fact of its existence in this spot, to have been handed down to futurity, together with many other similar circumstances of less striking character.

The third and last stream work to be considered this evening, is the Bog, which is situated in the parish of Ludgvan, about three miles from the town of Penzance, and one from the town of Marazion, at the head of the Mount's Bay, near a small rivulet or hill stream, called Ponsandean. The surface of this work was until lately a morass or bog (hence its name of bog) of many acres in extent, growing great quantities of gorse and reeds in summer, and in winter covered with water.

In the year 1828 the Great Western Railway, an extensive copper mine, in immediate proximity, that had been abandoned many years, recommenced working; this mine, by erecting immense steam-engines, drained off all the surface water, and a company of tinners, chiefly working-men, attempted to explore this spot, that had hitherto been inaccessible from the quantity of water on the surface; the stream had been wrought further up the valley, but with little success, and was given up, the quantity of tin not being sufficient to warrant the outlay of capital to erect machinery for drainage. The section of the strata presented some remarkable and highly interesting phenomena, proving that here at least had been two distinct deluges, and at a vast interval of time, as proved by the extent and gradual accumulation of the deposits. I must again request your attention to section No. 3: the stratum coloured green, shows the uppermost stratum of 3½ ft. of peat and gorse roots, which formed the surface of the morass. No. 2, coloured brown, alluvial soil of the same nature as the surrounding district, about 1 ft. 6 in. thick. No. 3, coloured red, indicates pebbles and fresh water sand of comparatively recent accumulation, containing no tin or shells of any description. No. 4, coloured blue, shows a bed of sea sand, 18 ft. deep, containing sea shells of several varieties, and what is very remarkable, the nearest place at which any sand of a similar nature is in Falmouth Harbour, a distance of at least 25 miles, and at no other place on the coast; it consists of broken particles of argillaceous slate, broken shells, and corals, with a small admixture of quartz and mica, is of a light blue colour, and highly valued by the agriculturist for its fertilizing qualities; many tons are annually dredged from the bottom of the harbour for that purpose. The sand on the shore of the Mount's Bay, about 400 or 500 yards distant, is totally different in colour and composition, as are also the few shells found in the sand in the Mount's Bay; it is formed chiefly of quartz, granite, and greenstone, with a great number of pebbles and boulders intermixed, evidently from the primary rocks in the vicinity, and is not at all valued by the farmer; under this bed of sand was found the remains of a prostrate forest, very perfect, and well-defined; the trees have been oak, holly, and the hazel; they were easily distinguished by their characteristic bark and formations, immense quantities of nutshells were found; from their number they appeared to be the accumulation of many years, and not the produce of a single season, and were as perfect in appearance as if but yesterday placed there; of course, after exposure to the air they became very friable, and fell to dust on the slightest pressure; great quantities were preserved as curiosities, but to little purpose. All the heads or tops of these prostrate trees, the roots of the trees, the date is lost in annuals of time, plainly indicating the catastrophe to have been brought about by a tremendous agent.

Tradition has handed down a vague account of the Mount's Bay having anciently been a wooded district, and that the islands of Scilly, now upwards of 30 miles distant, joined the main land; this falling of the wood in the direction before stated, would seem to countenance that opinion, which seems further strengthened by the ancient name of St. Michael's Mount having been "Men in Toll" or "Hoary Rock in the Wood;" it is now surrounded by the sea of great depth, and would seem to have become so at the period indicated in nature's own unerring page, the date is lost in annuals of time, but the nuts, some being appended to the boughs, seem to show autumn as the season of the year. After heavy gales, and the consequent disruption of the sand in the bay, similar trees are always discovered; the roots of the trees are planted in alluvial soil, 2½ ft. deep, coloured brown. Under this, at No. 5, coloured red, occurs a stratum of fresh water sand, containing a few fresh water shells, and is about 2½ feet deep; under this again are very large trees, but so decayed as only to be classed as bog wood: from what I could see I should judge them to have been gigantic oaks. The direction of the tops of these trees is directly opposite to those above, and lie towards the sea, showing the inundation to have proceeded from the hills at the time of their submersion; all the trees appeared to have been of one kind; there certainly was not that variety to be detected as in the stratum previously described.

Immediately beneath, the tin seam occurs, mixed as usual with pebbles, and a great quantity of extraneous matter, requiring great care in the manipulation for its preservation, as the grains are very small, comparatively speaking. The sand was disposed in regular laminae, and appeared to have been the deposit of a long series of tides. The shells were distributed in a natural order, and not the result of an instantaneous and accidental deposit. The sand appeared to have been deposited in a manner similar to warp-land; it must have had a subsidence since, as it is now considerably below the level of the sea. The manner of working this mine was very simple, and similar in every respect to that of the Nanchoth-viz, to remove the deeper strata, and subject the tin-bearing sand to the stream head; the very small particles here found rendered every precaution necessary. The speculation did not turn out as well as was anticipated; indeed, the limited capital of the proprietors did not give it a fair trial. After raising a considerable quantity of tin, and continually quarrelling as to who should be the captain, &c., this interesting spot was neglected and abandoned. During its working it was visited by a great many scientific men, geologists, and others. Every one was astonished at the discoveries made, particularly the sea sand, which, as I said before, is to be found nowhere but in Falmouth Harbour; and at the prostrate forest, confirming as it does so satisfactorily the ancient and vague tradition. It may also tend to give us a clearer history of this part of the country in early ages, by giving a colour to our traditions. We now arrive at the question, whence came these vast deposits of tin ore? It has long been held that the veins of tin in Cornwall have not been disturbed by the great deluge which formed the beds of tin found in the streams, the back of the lower present no indication of such an event—that is to say, no veins have been discovered bearing evidence of having been cut off as it were at the surface, leaving the course of ore bare, which must have been the case had this occurred. Again, the tin found in the veins is of a different appearance and quality to that found in stream-works—the latter being generally purer and richer, and altogether of another nature. Are they not the debris of ancient hills, and the ruins and wreck of mountains? These are the speculations of geologists, many of whom I know entertain these opinions. Many treatises have been written on this subject, but they all seem to be equally accounted for them. My own opinion, from close attention to the subject, is that they are the strippings of the granitic ranges still in existence, such as the Corn Brea, and other mountains of a similar character, whose tops and heights are now denuded of the argillaceous and micaceous slates (both tin and iron-bearing strata) that once covered them.

Near the Botallack Mine, in the parish of St. Just, in Penwith, on the summit of a cliff, in a ferruginous earthy stratum, are the remains of very ancient works, called tin floors, to which I have before alluded. The tin had been exhausted before the memory of man, but from the appearance of the workings, it seems to have been disposed in regular kidney-shaped masses or bunches, similar to the plumbeous deposit in Cumberland, and like the malachite copper bunches in the Mendip Hills; thus the miner frequently, at a day's notice, rise from a very rich and apparently inexhaustible vein to a mere thread, by pursuing which he may probably again be led to another bunch. This is a very uncertain and unsatisfactory method of mining, and is but seldom followed. At Botallack, the dip or inclination of the bunches corresponds with that of the hill side on which it is situated, and owes its preservation from the general destruction to its being situated on the top of a cliff, more than 300 ft. high, and nearly perpendicular. I think there is great presumptive proof of these having been the sources, and there are frequently various rock-stones, a dolerite, found on the hill sides, having no proper habitat or locality, partaking of the nature of the floor tin I have alluded to, and of that of the stream production. I have mentioned my theory to many mine captains, who fully concur in it.

If we suppose such strata to have existed, and to have been disrupted at the time of a tremendous revolution on the earth's surface, the difficulty is solved at once; and this appears to me to be the most rational way of accounting for them, as they are always found in the valleys and ravines between mountains of this character, or in the debouches, and deeps of the valleys.

I think it probable that all the joint agencies of the volcano, the earthquake, and the deluge, have been instrumental in the accomplishment of this mighty revolution on the earth's surface, of which we have reviewed such manifest, and I trust instructive and interesting examples. I cannot leave this subject without adverting to that Almighty power, whose high behest these tremendous agents obey, who the psalmist says, "Covered it as with a garment; the waters stood above the mountains. He looked on the earth and it trembled; He touched the hills, and they smoked."

Having said so much of the mines, I think I ought now to say something of the miners, who are distinguished from other classes of labourers by several peculiarities; no doubt resulting in some measure from the nature of their employment—viz., a recklessness and disregard of danger, and a superstitious belief in omens, supernatural appearances—*et hoc genus omnia*.

The Cornish miner has also his good qualities. He is hospitable, frank, communicative, and fond of imparting his experience to strangers. Formerly the tinners were considered, and not without reason, the most rude and uncultivated set of men in Great Britain; but by the exertions of the friends of education, and particularly by the labours of John Wesley, whose energetic discourses were admirably adapted to, and told on the most wonderful effect, great progress has been made. In later years, institutions similar to this, together with the former aids, have effected a mighty change, and may be said to have literally moved mountains; for those who were really western barbarians (as they were at that time called) have been transformed into one of the most intelligent, polite, educated, and religious communities in the kingdom. I cannot, nor ought I, here to omit my just tribute to that noble institution—the Royal Cornwall Polytechnic Society, which has afforded encouragement to the miner to display his industry and ability, their annual exhibitions at their hall in Falmouth sufficiently indicate with what effect; many most excellent and useful improvements in steam machinery, and the method of working the mines, have been suggested and introduced by working men of this class.

One instance deserves particular notice. It had been the practice to descend and ascend these vast depths by perpendicular ladders, fixed to the side of the shaft. The great physical exertion requisite very much impaired the health and strength of the men; and after eight hours' hard labour in the atmosphere of a mine, they were little fit to climb a distance of 600 yards perpendicularly. Frequently on arriving at the surface the poor fellows were completely exhausted. It had been suggested a machine might be constructed to obviate this difficulty. The society offered a premium and a medal for the best invention. Many plans, requiring great mechanical and engineering skill, were produced—some by persons of eminence in the scientific world; but the prize was awarded to Michael Loom, a working miner. His machine was adopted, and is now working in several of the extensive and deep mines, very much to the comfort of the employed and advantage to the employer. Mr. Burnard, a sculptor of some celebrity, was also one of this class, raised to comparative affluence and fame by the aid of this society. This gentleman is now the assistant of Mr. Rhemes, with whose name and works I presume all are conversant. But to return to the miners' superstitions—some of which are singular, and cannot be traced to any source. One of them is particularly so. They will not allow any person under any pretence whatever to whistle whilst underground; nor will they allow any oath to be uttered or song sung; but they may frequently be heard carolling hymns in their dark and dreary situation. They are firm-believers in spirits, ghosts, hobgoblins, and fairies. I think this may be in some degree accounted for from the numerous *ignis fatuus* in the moor land districts, which do not unfrequently deceive the weary, and, perhaps, they tinner, who, of course, ascribes his ill luck to an evil spirit.

After very heavy rains a voltaic or electric light, and sometimes a lambent blue flame, is seen to emanate from the earth over extensive copper and tin lodes, and this circumstance has been the fruitful source of tales that few little by carriage and repetition, particularly when the mind has a bias that way. Every headland on the coast has its sprite or phantom ship, and every cairn has its patron giant or devil. But all these supernatural personages are fast disappearing before the light of education. Their recklessness, I fear, will be a much more difficult affair to overcome. Exposed as they are to momentary destruction, from a variety of circumstances, such as premature blasts, falling from ladders, crumbling of earth work, sudden eruptions of water, and the falling of rocks, they evince a heedlessness truly unaccountable, nor can the remonstrances or threats of the captains and agents prevent or even restrain them. They will seldom even keep the ladders in proper repair, unless absolutely compelled to do so; and I have actually seen a man sitting on a powder barrel smoking his pipe, and a candle merely stuck against the wall by a bit of damp clay, when, from the quantity of loose powder strewn about, had a spark fallen, he and his companions must have been blown to atoms. Their constant exposure to danger seems to render them perfectly callous to it; I find in the coal districts the same culpable carelessness is prevalent. Many humane individuals have exerted themselves to the utmost to prevent such egregious folly, but without success. Trust that some industrious and energetic person, without making, so great and efficient a change in the county may at length reach this foolish disregard of personal safety; and I know of no more powerful auxiliary in this great and good cause than Mechanics' Institutions.

In this paper I have endeavoured to avoid all technical and mining terms, as I felt I wanted not to address a company of miners or mineralogists; I have stated nothing but what came under my immediate observation. I fear it may have been tedious and not so interesting as I had intended it to have been, but I have done to the best of my ability.

METROPOLIS WATER SUPPLY.

In these days of inquiry and rapid progress toward perfection in social, moral, and physical systems, it seems paradoxical to assert that London, the great emporium of the world, is supplied with water the quality of which is unfit for the use of man, and that notwithstanding the appointment of sanitary commissioners, and boards of health, and committees of both Houses of Parliament, before whom the most conclusive and incontestable evidence of the impure and unwholesome quality of all river and surface water supply has been given and published, the inhabitants of the metropolis are inert, and apathetic, and seem to be so prejudiced in favour of existing monopoly, that, in spite of the stunted, inadequate supply doled out to them by the companies in combination, and the dictatorial attitude so often assumed by the managing officials, they have hitherto withheld their support from those whose enterprise would relieve their thralldom, and ensure to them a constant supply of pure spring water, at a very much reduced charge. Pure water is an essential to health, and, as an article of trade, is highly remunerative to distributors, even at rates the most favourable to the consumer.

By an Analysis of the Trading Companies' Returns of the Expenses of the existing Supply of Water to the Metropolis, and Schedule of Prices, by W. Ranger, Esq., prepared by order of the House of Lords, dated the 22nd of June, 1852, it appears there are nine companies at present supplying 285,239 houses, with 76,755,430,362 gallons of water annually, equal to a daily average supply of 131-13 gallons per house. The gross rental received by these nine companies from the inhabitants of the metropolis and its suburbs is £1,898,086.4s.4d.; nearly 17.10s.4d. per house; against 17s.11s.8d. per house for the expenses, nearly 40s. per cent, or about 12s. 6d. per house; the difference between the average price charged each house and the working expenses being about 18s. per house. So that, under this aspect, the question of water supply assumes to mean appearance in a commercial point of view. Wherever human kind are thickly populated water will always command a remunerating price; but seeing it is a natural product, requiring neither skill nor labour, replenished continually by copious showers falling from the clouds in the form of rain, and that the works constructed to supply 100,000 houses can, at a comparative small outlay upon the original cost, be made applicable for the increase of that number, the rate of charge to each consumer, in that case, ought to be very much reduced, inasmuch as the additional outlay for the extension of pipeage necessary to such increased supply cannot bear a relative proportion to the increased income that would be receivable upon the gross amount of capital employed. The interest on capital used in the distribution of an article from Nature's storehouse, like water, should be limited to a maximum rate per cent., because the cost of that distribution bears no relative proportion to the abundance of the article so distributed; thus, as regards *water*, an increased supply can be given with equal profit at a decreased charge. Those rates of charge to each consumer, which have been increased their rates upon an increased demand, have not only been enabled to extend their works, without the aid of new capital, but have also paid an exorbitant per centage to their proprietors out of their revenue, to the cost and manifest injustice of the public. Such a mode of dealing with one of Nature's elements is unscrupulous and highly reprehensible.

The idea which induced the far-seeing Sir Hugh Myddleton to risk his fortune in an undertaking of such magnitude as his project for supplying London with water involved, was better conceived than appreciated by the public of his day, many, no doubt, condemning him as a visionary; but the result of his project has proved at least in a pecuniary point of view, the correctness of the judgment of that one individual, as opposed to the fallacious reasoning of the multitude. He foresaw the natural and inevitable increase of the population; and with it the extension of the town, its shipping, its commerce, and trade; and though, to many, the day was far distant—if it ever arrived—when the streams of the majestic Thames would become polluted with the refuse and waste of numberless human beings, he could realize the time when its course must become the common sewer, and its waters would be no longer applicable to the domestic purposes and requirements of the inhabitants of this great town. The source he fixed upon from which to obtain a pure supply was in the neighbourhood of the extensive chalk districts of Hertfordshire, which, as a pure source, still appears to be the only one capable of supplying in quantity and quality the requirements of the million residing on the northern side of this vast metropolis; but the mode by which that supply was, and still is, conveyed—namely, an open aqueduct, receiving in its course the drainage of thousands of acres of highly manured lands, and the admixture of other waters necessarily pumped up from the neighbouring rivers and streams, has increased the demands of the community, the chemical character of the original source is wholly changed, and organic matters, teeming with animal and vegetable life, are engendered, to the great detriment of the health and vigour of the constitutions of the inhabitants of London. The proof of the existence of these impurities are very satisfactorily shown in a pamphlet recently circulated, "On the results of Microscopical Examinations of the Organic Matters and Solid Contents of Waters supplied from the Thames and other Sources," by Drs. Lankester and Redfern, with which we have been favoured by the Secretary of the Watford Company. The characters are scientific attainments, and the facts are a sufficient guarantee for the correctness of their statements. It cannot be supposed that they would lend themselves in any manner to that which, if untrue, could be denied or refuted by the veriest tyro who possessed an achromatic microscope of sufficient powers to work out for himself the facts deduced from their investigation. These facts are incontrovertible, and should be made public, far and wide, by every well-wisher to the community, that the ignorant and thoughtless consumers of water may be made thoroughly acquainted with the evils they are daily imbibing by the use of a fluid called *water*, containing animal and vegetable matters, which not only impair the health, but in some instances tend to the destruction of life itself.

Some philosophers would feign persuade us that these matters are the nutritive properties of the waters—that water, as a pure liquid, contains nothing but the gases (or elements) of which it is constituted; and that without these matters it is not, nor can it be nourishing or serviceable to the human system; and that if the supply of water had been so manifestly impure and injurious to the well-being of the people, how has so many years been permitted to pass by, without a searching investigation into the subject having been made? Look around and ask again: if lighted streets, and stage-coaches, and hand-loom manufactures, and a general communication had been perfect in all their systems, as conducted years ago, where were the necessity to change these accustomed modes? What has induced this altered state of things? What! but the increasing pressure of necessity to change to meet the altered circumstances of the times! And thus must it be with water! The pernicious influences of a pestiferous supply will become at last so apparent, that not only health, but life itself—unless a pure supply be adopted—will perpetually demand the needful alteration. All the changes which have been effected of late years are undeniably improving and beneficial to the community, and the reduction of the pestiferous population, society would have had to endure all the plagues of famine and crime, disease and wide-spread mortality! Now let us hear Dr. Lankester's and Dr. Redfern's opinions upon these living organisms and dead and decaying matters which constitute the nutritive properties of water! "Throughout the whole extent of the Thames, from which some of the present water companies obtain the supplies, banks of a black deposit exist, which consist principally of animal and vegetable debris in a state of decomposition, which abounds with animal and vegetable life. Portions of woody tissue, spiral vessels, cotton hairs, fragments of seeds, and other parts of plants, are found in great quantities, and were frequently observed." "The Vibrionellus, an animal belonging to the family of the Annelides (a family to which the leech belongs) are always found in the greatest abundance where the deposit is thickest and blackest, and are most numerous where the waters contain the largest quantity of organic matters in a state of decay;" "these creatures resemble some of the forms of Entozoa, or worms found inhabiting man's body, and it is a grave question for consideration, from whence these creatures are introduced into the body. From what is already known of the history of these creatures in the lower animals, it is probable they are introduced into the system with the air which is drawn in by the lungs; other instances may be quoted of those permanent forms of animals which infest the body, and sometimes even destroy human life." Again, Dr. Redfern, speaking of supplies from the Thames and other river sources, says, "No other conclusion can be drawn from these facts, than these waters are unfit for the supply of the population of a large city. The continued administration of small quantities of decaying organic matters is undeniably prejudicial to health." No subject, therefore, can be more important to, or more worthy of the deepest consideration of the community at large, than a cheap and constant supply of pure water.

Physiologically considered, the human system is a modification, or chemical combination, of substances—the stomach being the laboratory in which the solids and liquids, received for nourishment, are decomposed and analysed; and just as the successful operations of the chemist in his laboratory are dependent upon the purity of the water he may have occasion to use in his analyses, so are the ailments of man converted, through the process of digestion, into healthful or baneful compounds acting upon his physical powers, according to the quality of the water used to assist that process. How important, then, the question of a pure supply of water! Nature is true to her own laws—they are immutable; and hence, in every instance of experimental test, the chemist is obliged to use distilled water, which is alone perfectly free from any subsiding matter or particles which may be held in solution, and without due regard to this point, a result very different to the fact sought would inevitably be shown. It is presumed that no one who reflects on this important subject, after the conclusive proofs afforded us by aid of the microscope, can doubt the existence of impurities of the most serious and alarming character in the water which is at present brought to the metropolis from every source by which it is supplied, and that it is, therefore, high time to introduce a new source. By reports and evidence on this great question of water supply, made and published by order of Government, all river and surface streams are found to be more or less objectionable; and though some may offer a more pure quality of water than others, even these are so variable at different times and seasons, that they cannot with certainty be relied upon. Dr. Lankester says, "although in perfectly pure water it would be impossible that either plants or animals should live, yet in a state of nature, pure water is not nutritive! Impure, or water impregnated with poisonous matter, is destructive."

water is seldom met with that does not contain the elements out of which plants and animals are formed;" and the same writer, alluding to the microscopic examinations of the chalk water, after having been ascertained that the filtering process, says, "in specimens collected with care, (that is, not from the open spring, which might be impregnated with organic matter), and especially when softened, the Watford spring water was found as free from organic matter as distilled water itself." Dr. Redfern also states, in reference to this Watford water, "I believe it to be as free from organic matter as any water can be in its natural state, and possesses every quality that is desirable in a water for the domestic uses of the population of a large metropolis." The water from these springs has also been pronounced by Professors Graham, Miller, and Hofmann, the eminent chemists who were appointed by the Government to consider the chemical quality of the water supply to the metropolis, to be a water "containing absolutely nothing of organic origin capable of further alteration or decomposition, and is, therefore, wholly unobjectionable on the ground of organic constituents," and that "in their judgment this water is entitled, from its chemical quality, to a preference over all others for the future supply of the metropolis." It appears to approach most closely to the standard of all that is excellent in a town supply, and is worthy of the greatest efforts and grandest works to procure and convey it. But the sources are near at hand, and the water is attainable without difficulty or great expense. With such a noble application of the chalk spring-water in view, as the supply of the metropolis, it would be a desecration to permit that water to be wasted on other uses." "It is our deliberate opinion, which we would enforce in the strongest terms, that the much-desired and most necessary improvement in quality of the London water, is associated with these sources of supply, and will depend upon their proper application to the uses of the people." (Vote Report to the Right Hon. Sir George Grey, Bart., dated 17 June, 1851.) Such is the character of the water proposed to be supplied to the northern side of London by the Watford Company from the neighbourhood of Bushey Meadows; and such is being raised from the chalk basins in various parts of the country, and now about Plumstead, by a company which is formed, and in operation, under the Registration Act, to supply with pure water, Woolwich, Deptford, Greenwich, Charlton, &c.

The Watford water can be abundantly obtained at a natural elevation of more than 130 feet above Trinity high water-mark, as stated in the prospectus, and after being softened by Professor Clark's process, is to be pumped up into reservoirs on Stanmore Common, at an altitude sufficient to cause it to rise to the upper stories of the highest houses in the most elevated parts of the metropolis, suburban places, and intervening districts between that and its source. Dr. Clark, speaking of this process, calls it "the lime-softening process." "For this purpose part of the water was converted into lime-water by the addition of slacked lime; two measures of this water mixed with nineteen measures of the water itself. The two clear waters became perfectly white, from deposited chalk, like a weak whitewash; but within six hours the mixture seemed to clear very well. Tried at the end of twenty-four hours, the hardness was only 3½; instead of 17½. At the end of five days the hardness was only 3½." "I have not met with any water that answers the lime-process of softening better than the Watford spring water."

The metropolis, during the past ten years, has increased upwards of 5000 houses a-year; and, according to the last census, the population in the past forty years has actually doubled its number. At this geometrical rate of increase, and judging from the efforts of the existing companies to furnish to the present numbers only half a water supply; it is not unreasonable to doubt their ability and power in the course of a very few years from the present time, to supply a quantity equal only to one quarter of the general demand—hence the necessity, as regards quantity alone, to encourage and support every feasible scheme for increasing the supply of water to our growing capital. The suburban places in the western and north-western districts contain about 50,000 inhabitants, most of whom, at present, depend upon the troublesome, inconvenient, and expensive supply of water by means of wells, rain-butts, or water-carts, and in dry seasons sustain damage from the difficulty of obtaining water even by these means; and property in the hilly spots, such as Highgate and Hampstead, is, consequently, in cases of fire, almost unprotected.

The obstructions and further opposition to which the promoters of this pure deep chalk supply appear to have been subjected for the past sessions of Parliament, are much to be regretted; but reference is made with confidence to the printed evidence as taken before the Water Committee of the House of Commons, in April, May, and June last. The facts elicited by that evidence cannot fail to create an impression on the minds of those who peruse it, that the only material feature of the Government bill, which imposes filtration on all the companies at present supplying London with water, will not get rid of, nor free that water from those organic impurities, which it was supposed that filtration would remove.

Dr. Lankester reports—"Although in perfectly pure water it would be impossible that either plants or animals should live, yet, in a state of nature, water is seldom met with that does not contain the elements out of which plants and animals are formed. Of the various elements of which the whole vegetable and animal kingdoms are built up, there are four which are universally present in plants and animals, and which must, consequently, be always present in water where either plants or animals exist. These are carbon, hydrogen, oxygen, and nitrogen. These elements do not, however, occur in their pure form; nor would they, if they did, be serviceable to organic beings; but they are found more especially in the form of carbonic acid and ammonia. The first substance contains carbon and oxygen; the last, nitrogen and hydrogen. Just in proportion as these substances abound within certain limits will be the abundance of vegetable life, and just in proportion to the vegetable life will be the amount of animal life. Plants derive their nourishment from carbonic acid and ammonia; animals derive their nourishment from plants. The natural source of carbonic acid and ammonia in water is the atmosphere—water exposed to the atmosphere as in rivers, and rain water contain these substances. The plants and animals whose existence and true nature are revealed by the microscope, are more numerous than those discoverable by the naked eye. Water was obtained from the pipe from the cistern at 22, Old Burlington-street, and examined after it had been submitted to the action of the house filter. The forms that presented themselves were very numerous, especially the diatomaceæ, even after the most careful filtering by one of Lissac's filters." Upon this point Dr. Redfern remarks, that "Organic matter in the solid form and in solution, as well as the smaller animals and plants, pass through the filters in large quantities; and this is not the fault of the filters, but it results from the solubility and the small size of the solid particles, and their separation, and which no filter yet known will remove. A water so contaminated with organic matters, as to be unfit for use for domestic purposes, cannot be sufficiently purified by filtration, or any other mechanical process." Further, Dr. R. Angus Smith, of Manchester, says—"Matter capable of being converted into living forms may be held not in suspension merely, but in solution also. It is this matter, even after filtration, that, becoming putrid by warmth, renders river water unwholesome; and when the amount of decomposing matter is considerable, it causes dysentery and fevers, often of a highly fatal character. After a stream of water is taken, and in the face of actual experiments to the purpose, the filtration clause of the Government 'Metropolis Water Supply Bill,' however strictly observed, will not protect the public health."

That the inhabitants of the northern part of London can be abundantly supplied with water, and at one-third the present cost, from the chalk springs at Watford, which, after having been softened, will possess immense advantages over every other water supplied by the existing companies, appears to be no longer questionable, except by those whose end is gain, and who, to gain that end, do not hesitate to pervert facts and stifle truths which they cannot boldly deny, and who, in the process of doing a more pure supply of water for domestic purposes is so apparent, that it is hoped the deep chalk schemes, where practicable, will recommend themselves to the most serious attention and favour of the public generally, to capitalists and others able to assist with their money and influence the promoters of such schemes in carrying out undertakings so valuable, and so pre-eminently important to the health of the community.

**THE BENZOLE LIGHT.**—Mr. H. M. Paine, of Worcester, Massachusetts, has patented a discovery for the improvement of the benzole light, in which his claims are for a mixture of alcohol, benzole, and water, in sufficient quantity just to render the fluid milky in appearance, and which will burn with a steady flame, and pass. A full description of the benzole light, as given by Mr. Mansfield before the members of the Institution of Civil Engineers, was inserted in the *Mining Journal* of the 21st April, 1849.

**GAS.**—The superiority of the Edinburgh gas over that of London arises from two causes—first, from the difference of the coal used for the manufacture of gas. In Edinburgh, Cannel coal is used, which generates gas of a highly illuminating power. In London, Newcastle coal is used, which produces a very inferior quality of gas. In the second place, from the difference of the systems in use. In Scotland, the coal is only suffered to remain in the retorts a sufficient time to give out its gases, attention only being paid to the quality of the gas manufactured. In London, the coal is allowed to remain a much longer time in the retorts, and by excessive baking a very weak gas is generated, of little illuminating power, and of little value for lighting purposes; indeed, it is well known that in London they are coke and gas manufacturers; in Edinburgh, only gas manufacturers. The Edinburgh gas is 5 feet of Cannel coal gas will give twice as much light as 10 feet of the ordinary London gas; consequently, at the same rate of charge per 1000 cubic feet, the one costs only half as much to produce the same quantity of light, the products of combustion, and all the disagreeable attendants upon the use of poor gas being lessened to a very great extent. *Journal of the Society of Arts.*

**GAS STOVE.**—Mr. Price, of Park-street, Birmingham, has lately registered a gas stove of a very ingenious character. He has contrived, by an apparatus not likely to be easily deranged, to do away entirely with the smoke, and also to prevent the slightest escape of gas, and at the same time, has secured the emission of powerful heat. Some of the stoves which have been submitted to our inspection are very tastefully designed and ornamented. *Wolverhampton Herald.*

**NEW ART OF ORNAMENTS METALLIC SURFACES.**—Numerous are the inventions or methods which have been applied for the ornamentation of metals within the last few years, we are not aware of any which, for simplicity and beauty, at all equal that recently invented and patented by Mr. R. F. Sturges, of Broad-street, Birmingham. It affords the means of decorating plain surfaces of objects formed of metal at a reduction of cost which throws all other processes, devised or invented, into the shade, while at the same time it materially improves their appearance. The invention depends upon the compression of a material between two or more plates of metal in the operation of rolling. It may astonish our readers to learn that the most delicate thread lace, such as is used in ladies' attire, perforated paper, or wire webbing, when passed through a pair of rolls, leaves an impression upon the sheet of metal, corresponding in depth to the compressibility of the material used as the pattern, and the density of the metal upon which the pattern is required to be impressed or imbedded. Various articles in electro-plate, Britannia metal, &c., such as tea services, salvers, waiters, &c., are decorated with the value of the invention, and how that for all ordinary purposes it is equal to the much more expensive process of decoration by engraving. In the brass foundry trade, the proprietor of the patent, R. W. Winfield, Esq., of the Cambridge-street Works, intends to introduce the same for the ornamentation of his patent metallic bedstead pillars, curtain bands, &c. Several of the objects we have examined prove satisfactorily the applicability of this class of ornamentation for the purpose. Mr. Winfield, we understand, will supply the metal from his extensive rolling-mills in the sheet, which manufacturers and others may convert into such objects as may be required to be made therefrom, and ornamented by the new process. The opportunity now afforded for the production of articles of elegant form and delicately ornamented surface will, no doubt, be appreciated. *Ibid.*

**IMPROVED COMPOUNDS FOR UNITING STEEL WITH IRON.**—Mr. Boyd C. Leavitt, Newport (U.S.), has secured a patent for uniting steel with iron. In his specification he notices that boxes, pulverised or not, which is generally used, does not insure a perfect union, and cannot be relied on with any degree of certainty, but great loss of time and material often occur by a ready separation of the materials, and a consequent perfect union. The claim made is for a peculiar manner of calcining and preparing crude borax, compounding the same in certain proportions with carbonate of ammonia, and the peculiar method of its application, so as to produce the intended effect, in a substantial and perfect manner.



## THE SCREW PROPELLER.

very valuable work by Mr. John Bourne, C.E., has just been published by Messrs. Chapman and Co., being a *Treatise on the Screw Propeller, with various Suggestions for its Improvement*, and of a size to render it a companion to the *Steam-Engine*, by the same author, noticed in the *Mining Journal* of Jan. 13, 1849. The object of the work, as is informed in the preface, has been to collect the most material facts connected with the operation of the screw propeller, so as to bring the reader up to the highest point of information yet reached upon the subject. Further, having perceived that the screw-propellers, as heretofore constructed, have had weighty and inevitable defects, the author has devised expedients for their remedy, which suggestions will, we have no doubt, receive that attentive consideration which they evidently merit. Among these expedients, perhaps the most formidable is their inability to contend against head winds, without involving the most wasteful expenditure of coal; and this has been remedied, and that such vessels would be able to proceed against a head wind of such strength, that a paddle-vessel of equal power would not be able to stem it at all. These views turn out correct, great advantages will undoubtedly have been obtained by the author's investigations. It strikes as somewhat extraordinary that ships, with the accumulation of skill of a thousand generations, should continue to be constructed in so unscientific a manner as they have been; and the author shows that, as a ship is the weakest in the direction of her length, and liable to bend or break in the middle, it should be regarded as a hollow beam, of which the deck is the upper, and the bottom the lower edges, and strengthened in the top and bottom, which have to endure the strain, instead of the various kinds of struts, trusses, and other palliatives hitherto in use. The historical account of the screw propeller, it is supposed to be undoubtedly of very ancient origin, and is said to have been in use in China for ages, but in Europe is a much more modern contrivance. It is a modification of the wind-mill or smoke-jack, and the idea of making a screw on this plan to work in water appears to have originated with Robert Hooke, an ingenious member of the Royal Society, about 1660 to 1670, who was one of the most extraordinary men this country ever produced as an adept in general science. He was born in 1635, and died in 1702-3. Although some machines, somewhat approaching to the screw propeller, were introduced by Leupold 1734, Emerson 1754, and others, it appears that the first patent which really adopted the screw was Joseph Bramah, in 1785; this was a kind of paddle-wheel projecting from the stern, the vanes or floats being placed at an angle, giving it the powers of the screw. He was followed by W. Lyttleton, in 1817, Shorter 1800, Stevens 1804, James 1811, Trevithick 1815, Perkins 1825, Tredgold 1827, Woodcock 1832, Smith 1836, Ericsson 1836, Lowe 1838, J. O. Taylor 1838, P. Taylor 1838, Hadden 1839, Rennie 1839, Hunt 1839, Capt. Carpenter 1840 and 1851; and between 1840 and the present time about 70 patents have been obtained for various modifications of the screw propeller in England alone, besides many others in the European States and America; many of them reproductions of former inventions, with important modifications. Smith and Ericsson, at the time of taking out their patents in 1836, caused more attention to be paid to the subject than at any previous period, and both were eminently successful. Mr. Francis Pettit Smith was a farmer at Hendon, and patented in May, 1836, a screw propeller; having obtained the assistance of Mr. Wright, the banker, a model boat was constructed fitted with the screw, and exhibited at the Adelaide Gallery. The results were so satisfactory, that a vessel of 100 tons was fitted up, and placed in operation on the Paddington Canal, in January, 1837. During one of these trips half the length of the propeller was broken away, when instantly the boat quickened her speed, and realized a better performance than before; from this discovery a new screw of a single turn was fitted, and the most satisfactory results ensued. In this miniature vessel the patentee went to sea in most favourable weather, and fully tested the capabilities of the screw. Subsequently, as the attention of the Admiralty was called to the subject, the *Arcturion* was built, of 237 tons, at a cost to Mr. Smith and those friends who had related themselves with him, of 10,500*l.*, and after many trials on the Thames, she sailed to sea on 15th May, 1839. She made the voyage from Gravesend to Portsmouth in 20 hours, and in a match beat the *Vulcan*, one of the swiftest vessels in the fleet. She was then placed at the disposal of Capt. Chappell, who with Mr. Smith boarded, circumnavigated Great Britain, calling at every port of any consequence, and afforded shipowners, engineers, and others, the opportunity of becoming acquainted with this novel mode of navigation. She afterwards went to Oporto, making the fastest voyage then on record. The first vessel tried with Ericsson's screw propeller was the *Francis B. Ogden*, which attained a speed of 10 miles an hour, and towed a schooner of 140 tons at seven miles an hour. To engineers it is, therefore, known that Smith, or at all events, him and Ericsson, established the art of screw propulsion, while other patentees have lain until the battle was fought, and then came forward to claim the victory; and courts have, puzzled by questions they did not understand, have permitted claims which ought in justice to have been at once disallowed. We ought not omit to state that great credit is due to Mr. Wright, the banker, but for whose pecuniary aid Mr. Smith's patent would, perhaps, never have been taken out; also to Messrs. Rennie, who were engaged from the first to assist favourably of the issue of the project, and had a large interest in it; and to those gentlemen forming the "Screw Propeller Company," who have hitherto had no return in the shape of profit for the large sums invested. At this point we have got through two chapters of the work, the most interesting, though not the most important. The third treats on the scientific principles concerned in the operations of screw vessels, and in all there are twelve chapters—on the comparative efficacy of the screw and paddle, merits of different kinds of screws, screw vessels, details of their construction, screw and paddle combined, and a recapitulation of doctrines and conclusions, with an ample appendix, containing much useful and important information. On the comparative advantages of screw and paddle vessels, it is assumed that in smooth water, and both vessels in their best trim, they are about equal efficiency, the advantage, perhaps, laying rather with the paddle, although of practical account. In deep immersions, however, screw vessels have a decided advantage, while in head winds paddles are the best. Screw vessels encountering head winds are most wasteful of power, but the author remedies this by making the screw deeper in the water, and placing it further forward in the dead wood. "Screw vessels, as they will hereafter be constructed, will, in the author's opinion, be found preferable to paddles under all circumstances, and that the latter must be abandoned for ocean navigation. The volume is exceedingly well arranged and got up. There are 20 beautifully engraved illustrations of the machinery of various screw vessels, and a large number of wood-cuts; and to the engineer, ship-builder, and man of science, will prove a valuable source of reference.

**ON THE PREPARATION OF LIQUID GLUE.**—All chemists are aware, that when a solution of glue (gelatine) is heated and cooled several times in contact with air, it loses the property of forming a jelly. M. Gmelin observed that a solution of isinglass, enclosed in a sealed glass tube and kept in a state of ebullition on the water-bath for several days, presented the same phenomenon—that is to say, the glue remained fluid, and did not form a jelly. The change thus produced is one of the problems most difficult of solution in organic chemistry. It may be supposed, however, that, in the alteration which the glue undergoes, the oxygen of the air or of the water plays a principal part; what leads me to think this, is the effect produced upon glue by a small quantity of nitric acid. It is well known, that by treating gelatine with an excess of this acid, it is converted by heat into mucous acid, fatty matter, &c. But it is not thus when this glue is treated with its weight of water and with a small quantity of nitric acid; by this means a glue is obtained which preserves nearly all its primitive qualities, but which has no longer the power of forming a jelly. Upon this process, which I communicated, is founded the Parisian manufacture of the glue which is sold in France under the title of "*colle liquide et inaltérable*." This glue being very convenient to cabinet-makers, joiners, pasteboard-workers, toy-makers, and others, as it is applied cold, I think it my duty, in order to increase its manufacture, to publish the process:—It consists in taking 1 kilo. of glue, and dissolving it in 1 litre of water in a glazed pot over a gentle fire, or, what is better, in the water-bath, stirring it from time to time. When all the glue is melted, 200 grms. of nitric acid (spec. grav. 1.32) are to be poured in, in small quantities at a time. This addition produces an effervescence, owing to the disengagement of hyponitrous acid. When all the acid is added, the vessel is to be taken from the fire, and left to cool. I have kept the glue, thus prepared in an open vessel during more than two years, without its undergoing any change. It is very convenient in chemical operations; I use it with advantage in my laboratory for the preservation of various gases, by covering strips of linen with it.—M. S. DUMOLIN: *Comptes Rendus*, Sept. 27.

**PURIFICATION OF NAPHTHALENE AND PREPARATION OF NAPHTHALINE.**—Mr. Whitesmith (Glasgow), suggests the following method of purifying coal-naphtha, so as to fit it for preserving potassium.—Take a considerable quantity of the best rectified coal-naphtha, and add about 10 per cent. of concentrated sulphuric acid. Keep them in contact, with frequent agitation, for three or four days. Decant the naphtha, and add fresh acid, repeating the same process several times. The naphtha, which is now of a deep red colour, with an acid reaction, and most pungent odour, is distilled very gradually, and neutralized by a current of dry ammoniacal gas passed through it. It is then repeatedly distilled, rejecting the last portions. Thus, it finally appears as an exceedingly mobile, limpid fluid, of a pleasant odour, and is perfectly adapted for preserving potassium. To obtain naphthaline, mix common bituminous coal in fine powder with an equal quantity of quick-lime, put the mixture in a small tin-plate still, and heat over the gas furnace for about an hour. On afterwards opening the still, naphthaline will be found deposited inside the head.—*Artisan*.

**MANUFACTURE OF GAS FROM WOOD.**—Two years ago, Dr. Pettenkofer showed by experiment, at a meeting of the Polytechnic Institute of Bavaria, that a very considerable amount of illuminating gas could be disengaged from 2 ozs. of wood. The inventor's process now in operation at Bielefeld, and is also about to be introduced at Zurich, Stockholm, and Drontheim. The process is said to be far less expensive than the manufacture from fossil coal, and furnishes a gas which is free from sulphuretted hydrogen, and several useful collateral products, as charcoal, wood-tar, and wood-vinegar.—*Central Blatt*.

**CURIOSITIES OF GEOLOGY.**—It is known as a fact in geology, that below the depth of 30 feet the earth becomes regularly warmer as we descend. On an average, the increase is at the rate of 1° Fahr. for every fiftieth foot. At the bottom of the mines of Cornwall—a depth of 1200 feet—the thermometer stands at 88, equal to high summer heat. At this rate, rocks and metals would be melted 20 miles below the surface; and down in the bowels of the earth, several hundred miles, the heat would be ten thousand times hotter than melted iron. Who is there that can wonder at earthquakes, when all things rest on a molten sea of fire?—*Literary Journal*.

**ENORMOUS SHEET OF PAPER.**—At Airthrey Mills, Stirlingshire, a sheet of web of white paper has been manufactured, without a break, being one continuous sheet, 3000 yards in length—within a little of 1½ mile—24 inches broad, and weighs 400 lbs. This web was made, dried, and finished ready to be dispatched within 3 hours.

**THE WEIGHT THAT CAN BE TRUSTED ON A PILE.**—Let us take a practical case, in which the ram weighs 1 ton and falls 6 ft., and in which the pile is sunk half an inch by the last blow; then as half an inch is contained 144 times in 72 inches, the weight the ram falls, if we divide 144 by 8, the quotient obtained, 18, gives the number of tons which may be built with perfect safety, in the form of a wall, upon such a pile.—*Builder*.

**HOLLOWAY'S OINTMENT AND PILLS ARE SURPRISING REMEDIES FOR THE CURE OF BAD LEGS.**—Mrs. Aiken, a stewardess of steam-vessels, residing in William-street, Great Howard-street, Liverpool, was afflicted for years with a dreadful bad leg, in which were several deeply seated ulcers, that defied the skill of many eminent surgeons to cure. At last she was obliged to resign her situation and go into the Liverpool Infirmary, where she remained five weeks without improvement. She left the institution, however, cured by using Holloway's Ointment and Pills, and these valuable medicines speedily effected a sound and perfect cure of her leg, and restored her to health and strength.—Sold by all druggists, and at Professor Holloway's Establishment, 244, Strand, London.

## ON THE GEOLOGY OF SOUTHERN AFRICA.

BY A. O. BAIN, ESQ.

(Read at the Geological Society.—W. HOPKINS, Esq., President, in the chair.)

This memoir was illustrated by a finely executed geological map of the country south of the Orange River, several geological sections of the same district, and a fine suite of rocks and fossils, this collection being supplementary to a still more extensive series previously sent. The following abstract does not by any means give in full all the results of Mr. Bain's long-continued and arduous investigations in the arid and often dangerous districts in which he has spent so great a portion of his life, nor is special reference here made to the writers whom Mr. Bain mentions as having previously described some of the geological phenomena of the Cape, or to the communication from Mr. Bain himself, already published in the *Geological Society's Transactions* for 1845, but a general view is here offered of the most interesting and important facts connected with the geological structure of the southern extremity of the African continent. The granite of Table Mountain and its vicinity, and of George District, is the lowest and fundamental rock, but the superincumbent gneiss and clay-slate are of older date, as is seen by the fact of their having been locally melted, disturbed, and penetrated by the granitic rock below them. The granite does not appear as a continuous band along the coast, but only protrudes as local patches, nevertheless it may be considered both as the lowest and the most southern of the several rocks forming this region. It appears also in Natal. The next great rock formation consists of the gneiss and clay-slate above alluded to. The clay-slate is very extensively developed, and is of great thickness; it occurs in the southern and south-western sea-board, and the districts west of Oliphant's Berg and Hottentot's Holland, and the districts south of Lange Berg. At Cape Town it is a bluish black rock, worked for building purposes; at other places it passes into mica slate and gneiss, and sometimes it is decomposed into a soft variegated clay: it is much traversed by quartz veins. The beds have always a high angle, and are often vertical, contorted, or even overturned. Lying unconformably on the clay-slate and the granite are beds of sandstone and conglomerate. These cap the Lion's Head, and constitute the mass of the Peninsula down to Cape Point, occur as patches in the district north of Cape Town, and south of the Zander End River, and form the ranges from Oliphant's Berg to Hottentot's Holland, and from Winterhoek's Berg to Lange Berg and Kromme Heigte. In the most northerly of these ranges the beds dip to the north, and are overlaid by a series of fossiliferous rocks, which extend as a band, about 30 miles wide, from Hantam River on the north-west, to the Cooja Mountains on the east. The fossils of these rocks consist of trilobites, spirifers, gastropods, and other molluscs, which have a decided "Devonian" character. At the eastern extremity of the band, and at an extensive district of undulating sandstone beds occur the Gamtoos and Great Fish Rivers. These beds may possibly be of the "carboniferous" age. Both the carboniferous and Devonian rocks are succeeded on the north by a narrow band of blue clay-stone porphyry, which extends across the colony, a distance of 600 miles, from the Hantam River on the north-west, to the Great Fish River on the east, parallel with the above described bands of rock, and, like them, keeping a general parallelism with the sea-coast. The porphyry dips to the north throughout. In Albany there are also long narrow patches of the porphyry, south of the great bank lying on the undulating sandstone (near Graham's Town), and still further south (north of Knop) a thin parallel band dips south, and is overlaid by a bed of conglomerate, and that again by fossiliferous beds.

These last are well seen near the mouths of Sunday, Zwartkops, and Gamtoos Rivers, and contain abundance of fossils (trilobites, exogyra, asters, anoplomya, gervilla, cucullia, ammonites, nautilus, &c., together with ferns, zamias, and other plants, and remains of large reptiles), and are considered to be of the "lower cretaceous" age. These beds again occur to the north, near the mouth of St. John's River. Tertiary beds, containing many existing shells, cover these last-named strata on the seaboard. 8 mi. of the great porphyry band, and throughout its whole extent, Mr. Bain has discovered an extensive series of deposits, which are rich in remains of plants and reptiles. The former occur particularly at Ecca Heights on the east, and at the Potters River on the west. The reptile remains chiefly occur between 32° and 33° latitude, and in the Sneliew Berg particularly, and consist of a remarkable group of peculiar forms, of which the *Dicynodon* is the only one yet described. Near Graaf Reinet fish remains, and a few fossil shells, have been found in these deposits. This extensive series of stratified deposits, occupying the Great Karoo Desert and the regions to the north and east of it, may probably prove, when its fossils have been more fully studied, to have been the result of a great inland body of water, possibly almost entirely fresh water. Still further to the north-east, immediately west of the Draken Berg, is a wide tract, occupied by a superior member of this great "Karoo series," and containing similar reptilian remains, fossil trees, and thin beds of coal. The whole of the region occupied by these "Karoo" beds is traversed in every direction by numerous vertical dykes of greenstone—the largest of which pierces the Spitzkop, and forms its summit at a height of 10,000 ft. above the sea. The erupted matter of these dykes, on reaching the surface, has formed horizontal beds, rudely prismatic, and capping all the high lands and mountains; and the dykes are indurated and altered in the vicinity of these dykes; but are not disturbed. Besides the above-mentioned series of strata, there remain to be briefly noticed the extensive deposits of calcareous tuffa both on the coast and in the interior; local patches of white sandstone, lying unconformably on the clay-slate near Wynberg and at Zwelldam, containing silicified casts of alveolar plants and upright stem-like bodies; the superficial clays and seams of lignite near Tigerberg, especially noticed by Sir J. Barrow; the superficial ferruginous deposits on the Cape flats, sometimes attaining a thickness of 10 ft., and used for the high lands; and that of the Kogea springs, near Port Elizabeth; and, lastly, the masses of shell breccia found at various heights along the coast, and often occupying the floors of caverns, which have probably been brought thither by the aborigines and wild fowl.

## VENTILATION OF MINES—THE STEAM-JET.

At a meeting of the members of the Northern Coal Mining Institute, held at the Literary and Philosophical Society, Newcastle—NICHOLAS WOOD, Esq., in the chair—there was a numerous meeting of coalowners and viewers; four Government Inspectors were also present—Messrs. Matthias Dunn, Newcastle; Joseph Dickinson, Manchester; Thomas Wynne, Staffordshire; and Herbert Macworth, South Wales. Mr. Dunn was already a member of the Institution, and on the motion of the chairman, the other gentlemen were unanimously elected honorary members; with also Mr. William Lancaster and Mr. Charles Morton, Government Inspectors. Several ordinary members were likewise elected.

Mr. E. SINCLAIR (secretary) having read the minutes, Mr. WILLIAM ARMSTRONG, of Wingate Grange, read a paper on the ventilation of coal-mines by the furnace and steam-jet, and minutely detailed the nature and results of experiments which he had performed, closing his report with the following conclusions:—

1. In shafts of all depths, the consumption of an equal weight of coal will produce a higher ventilating current from the furnace than the jet.
2. The difference in favour of the furnace, when the jet is placed at the bottom of the shaft, will be increased as the depth, but in higher ratio—the large column adding to the exhausting power of the furnace and diminishing that of the jet.
3. In the production of equal currents of air, the furnace is the more economical agency of the two.
4. It is probable that in all shafts, where the temperature is sufficiently high to preserve the steam from condensation, a large mechanical effect—a larger volume of air—will be obtained when the furnace is assisted by the jet; the consumption of coal, however, being largely increased.
5. Except in conjunction with the furnace, the jet, whether placed at the bottom or top of the shaft, is from the liability to sudden stoppage and irregularity of motion, incident to all machines, unfitted to the very important function of ventilating our deep and extensive collieries.

The CHAIRMAN also read a paper on the same subject, comprising a report on the experiments made at Hutton and Killingworth in presence of the Government Inspectors. He first disposed of the "furnace limits," so called; but, he said, improperly so called—the limit having no more to do with the furnace than the jet; a current of air, however produced, being exposed to a resistance proportioned to its velocity. The general result of the Hutton experiments was highly favourable to the furnace in comparison with the jet. Even an auxiliary jet was found to be of little service, and at high velocities hardly any. At Hutton, the jet was applied at the bottom of the shaft; it was tried at Killingworth at the top, with three large boilers on the surface. He was surprised to find, with so large an evaporation of water, that the effects were so comparatively trifling—not greater than what were obtained from one small 7-foot furnace. Other two experiments gave—

Jet	19,816
Furnace	21,247
Jet and furnace	30,857
Furnace	34,960

These results were obtained in deep mines. In a comparatively shallower shaft, Mr. Greenwell got 6000 cubic feet by the jet, and 7200 and 8000 by the furnace, the jet consuming more coal.

The elaborate papers of Mr. Armstrong and Mr. Wood will doubtless be printed. Mr. DICKINSON observed, that he thought Mr. Darlington would hardly be satisfied unless the jet were tried at Killingworth as well as at Hutton with the cylinder tubes. At Ince Hall, these results had been obtained—

Jet	37,350
Furnace	36,030
Jet and furnace	36,390
Furnace	37,390

At another pit, however, the results were different:—

Boiler fires	26,416
Jet and boiler fires	35,381
Jet and boiler fires	35,122
Furnace and boiler fires	35,364
Jet, furnace, and boiler fires	48,805
Jet, furnace, and boiler fires	39,060

Mr. Dickinson explained that, through some peculiarity in the arrangements, the jet, in the latter experiment, seemed to take the wind out of the sails of the furnace. The CHAIRMAN said, as we understood him, that the jet had been tried at Killingworth with and without cylinders, and with the same results. His desire was to try the experiment in any way that the Government Inspectors thought proper, so as to elicit the truth.

Mr. MACKENZIE observed, that the jet was tried at a colliery near Swansea in 1828, and we understood him to say, without advantage. To Mr. Wood the coal trade and the public were deeply indebted for his careful and elaborate experiments. The handsome manner in which he had repeated them for their (the Inspectors') satisfaction could not be too highly applauded. His liberality and generosity were most exemplary; and he could not sit down without thanking the chairman and the members for the honour which they had conferred upon himself, personally, by placing him on the roll of members. He was proud to have his name ranked with the mining engineers of a district which, most of all, science was combined with practice.

Mr. WYNNIE, also, returned thanks, and observed, that as he could say little for his own district, the less said the better; he would do what he could for its improvement. The CHAIRMAN said, he was reminded by what had fallen from Mr. Macworth, that the colliery near Swansea, to which he had referred, was placed under his (Mr. Wood's) control, and he sent to Wales as his manager a person named Stuart, who proposed to him to try steam ventilation, and made the experiment.—*Gateshead Observer*.

**DRESSING STONE.**—Mr. B. Eastman, of Concord, New Hampshire, has patented a method of dressing stone, which consists of a crank motion, to which the tools are attached; and in facing, reeding, fluting, or cutting mouldings, they are forced with a steady positive motion against the material, and turn out a very superior description of work.

## ON THE WASTE GASES FROM THE BLAST FURNACE.

At the meeting of the Institution of Mechanical Engineers, at Birmingham, Mr. Samuel H. Blackwell (of Dudley) read a paper "On the Arrangement of the Materials in the Blast Furnace, and the Application of the Waste Gases."

It commenced by showing that the importance of their employment had long been known and adopted in many of the continental iron works; the high cost of fuel, and more attention paid to scientific knowledge, led to their adoption in France and Germany long before their application here. The works of Pennsylvania soon followed the example of the continent, and their use has been general for some years past. The object of the paper was to point out some of the causes which have prevented their more general use in England in our great iron works, and to call attention to the best arrangement of the materials in the furnace.

The first attempt of the kind in Britain was at the Ystalyfera Iron-Works, in South Wales, for which a patent was secured by Mr. Budd. The method was at first defective, from the direct flame of the furnace being taken off instead of the gases themselves. The moment the gases emerge from the top of the furnace, and unite with the atmosphere, ignition takes place; and if the flame is to be economical, it must be immediately applied to the surface upon which it is to act, or its heating power is given off, and consequently wasted. The attempt, therefore, to apply flame necessitated the erection of the boilers, or of the pipes in which the blast was to be heated, in immediate contiguity with the tunnel head. In many works this was a matter of great difficulty, and in very few could it be done without inconvenience. Even where practicable, the flame always acted powerfully upon the passages through which it passed, and exhausted itself in proportion to their length and absorbing powers, before it became available at the points where it was really required. This difficulty led to such an alteration in the arrangements adopted, that instead of the flame the gases themselves could be drawn off the materials in the furnace, before they had become ignited by mixing with air. This was effected by a cylinder of cast or wrought-iron, resting by a broad flange upon the lining of the furnace, and carried down to a depth of several feet beneath the top of the pipe through which the gases passed off. The diameter of the furnace expanding from the top downwards, an open space was thus enclosed between the inside wall of the furnace and the cylinder, forming a reservoir for the gas, into which, as long as the cylinder was kept full, no air from above could enter. This arrangement perfectly answered its purpose, as far as taking off the gases unignited; and although they still passed off at a high temperature, the loss of heat in the passages was much diminished, being confined to simple radiation from the hot but unignited gas; however far it was carried its chemical nature remained unchanged, and atmospheric air was allowed to mix with it only on its reaching the point where the heat given off in its combustion became available. Still there remained two objections:—the first, was the very powerful draught was required to draw the gas with regularity, and the entire quantity, under the most favourable circumstances, bore but a very small proportion to the quantity generated, the greater part still escaping. Mr. Blackwell tried many experiments on two furnaces in Derbyshire, and many attempts were made by other individuals to obviate the escape of the gases, by an iron cylinder placed on the top of the furnace, and the quantity of eduction space determined by a regulator; but the saving of Welch coal to be effected led to the attempt to make the whole quantity available by closing the top of the furnace, and not allowing any gas whatever to escape into the open air.

This was first effected by Mr. Levick, at the Cwm Celyn Works, by placing two cast-iron bearers across the furnace, at a depth of about 7 feet below the top; upon these a cone of cast-iron is placed, the base of the cone being less than the diameter of the furnace; a short cylinder, about 3½ feet deep, is suspended from the filling plate, resting by a flange, as in the case of the cylinders previously used, upon the lining of the furnace; and a second cylinder, of about the same depth, rests upon the base of the cone; this second cylinder being larger than the first, and being moveable around it, can be lifted up by means of two bars of iron, or chains attached to it, and passing through openings made for the purpose in the flange of the upper cylinder. When the lower cylinder rests upon the cone the top of the furnace is closed in entirely, and the space inside the two cylinders can be filled with the materials constituting the charge. Upon lifting up the lower cylinder, the charge immediately falls into the furnace round the base of the cone; and the cylinder being again lowered, the top is once more closed in. By this arrangement all the gases can be economized, and far greater heating power obtained. Another arrangement in which two cones are employed, with some other modifications, has long been in use at several of the furnaces of the Cwm Celyn Company, and both there and at the Cwm Celyn Works the furnaces with closed tops work well; they carry equal, if not better, burdens than those which are open. They work with equal regularity, and make an equal quantity of iron. By the action of the cones, the materials wheeled into the closed furnaces are scattered round the side of the furnace, and are thus arranged as they would be in open furnaces with wide tops. It thus became at once obvious that cylinders in Wales had been productive of less injurious consequences to the general working of the furnace than those in Staffordshire, because the greater width of the Welsh tops had permitted cylinders of from 8 to 10 ft. to be employed, whilst in Staffordshire only cylinders of from 4 to 6 ft. were practicable. The important improvement produced on the working of the furnace, chiefly by an alteration in the arrangement of the materials is a point of considerable interest, but one to which little attention has been hitherto paid.

Mr. Blackwell then detailed some experiments in which an increase of make had been effected by a peculiarity in filling, by which the coke or charcoal is placed in the centre of the furnace, and the ore and limestone around the sides. It must, however, be borne in mind that these arrangements for economizing the gases produce invariably a loss of heat in the furnace, where the closed tops are successfully employed, the production of white iron is rather sought for, and hence the tendency to produce that quality is no disadvantage. In many cases, however, it must be a fatal objection to their use; but for this objection closed tops would become universal, as they entirely do away with the necessity for a lofty stack, and enable all the gases to be economized.

In considering the composition of the gases, and the chemical changes which take place in the furnace, Mr. Blackwell stated that the most able investigations of the nature of the gases of the blast furnace are those of M. Ebelmen, and almost all the knowledge we possess of their chemical composition will be found in a paper communicated by him to the *Annales des Mines*, in 1851, and which contains, not merely a *résumé* of M. Ebelmen's own investigations, but also an examination of those of Messrs. Bunsen and Playfair, as reported to the British Association. From M. Ebelmen's experiments it would appear that the first action of the blast upon its entrance into the furnace through the tuyères is to produce carbonic acid, by the union of the oxygen of the atmosphere with the carbon of the coke; this is accompanied with the intense heat required for the fusion of the iron ore. The carbonic acid, as it passes upwards, is converted into carbonic oxide, by contact with the carbon of the incandescent coke, above the zone of fusion. As the carbonic oxide ascends, higher in the furnace it acts as a reducing agent upon the oxide of iron of the ore, by uniting with the oxygen, by which a considerable portion is again converted into carbonic acid. The gases emerging from the top of the furnace are, therefore, from the result of the chemical action now detailed, and also from the carbonic acid liberated from the limestone used as flux, more highly charged with carbonic acid than those which may be taken off at a lower point, and consequently to the extent of this greater proportion of carbonic acid, they possess less heating power. Where, therefore, only a portion of the gases are taken off, as in the case of open tops, the depth of the flue is important in reference to the quality of the gas taken off, as well as to its freedom from any admixture with atmospheric air.

In this notice of Ebelmen's experiments, all attention to the composition of the gases, except in reference to their heating power, is purposely omitted.

The results at which we may be now said to have fully arrived are the following:—1. That the waste gases may be used with great economy in raising steam, and heating the blast.—2. That they must be taken off in such a manner as to prevent their mixing with atmospheric air before they arrive at the place where they have to be applied.—3. That this may be effected in two ways, either by placing the opening for taking them off sufficiently below the surface of the materials in the furnace, or by closing the filling plate entirely.—4. That the first plan is most desirable where grey iron is requisite, but where adopted it is necessary that a powerful draught should be obtained by a sufficiently lofty stack.—5. That when thus taken off as gas, they can be conveyed to any distance proportionable to the power of draught available, without losing any of their calorific power beyond that lost by simple radiation; the whole of the calorific power to be obtained from their combustion being economized, until atmospheric air is admitted to enter the point where the heating effect is required. That no arrangement of the filling plate should be made, which narrows that part to less than 8 ft. diameter; from 9 to 10 ft., according to circumstances, being generally the most advantageous.

An important discussion ensued, which we shall give in *extenso* in our next.

**MACHINE FOR CRIMPING IRON BARS.**—Messrs. Slocum and Sayles, of Lansingburg, New York, have patented a machine for bending bars of iron into a shape that is often employed, particularly for ornamental fences, house-work, &c.—we mean the zig-zag shape. The rolling mill employed for this purpose consists of two under rollers, placed side by side, and of two upper rollers—the latter two running in bearings which can slide up and down, in the framing, so as to receive the advance to the under rollers. Between these two sets of rollers there slides a bed, which carries the dies intended to impress the desired form on the iron. The patent more particularly applies to the construction of these dies. They are formed in pairs, so that the projections of the upper die fit into the recesses of the lower one. Their shape, in general, is angular, and the upper die is so formed with joints that each angular piece can be forced into its corresponding cavity in the lower die, without the necessity of its fellow projections partaking of the motion. The bar of iron being placed between the dies, which are fixed on the movable table, a chain or cord is attached from the table to the further lower roller, so that the former may be drawn along as the rollers revolve. The upper rollers, which give the pressure, are forced down to their work by weighted levers; hence, when the machine is set in motion, the table and dies are drawn between the rollers, and the first jointed projection of the top die is forced into its recess in the lower die, thus giving the iron bar the desired shape. The table continuing to advance, is caught between the second pair of rollers, which hold the bar from shifting whilst the second projection is descending, and in this manner the process goes on until the whole length of the bar is fashioned into the shape required. The inventors do not confine themselves to this sort of die alone, but propose another mode also, in which both top and bottom dies are made flexible.

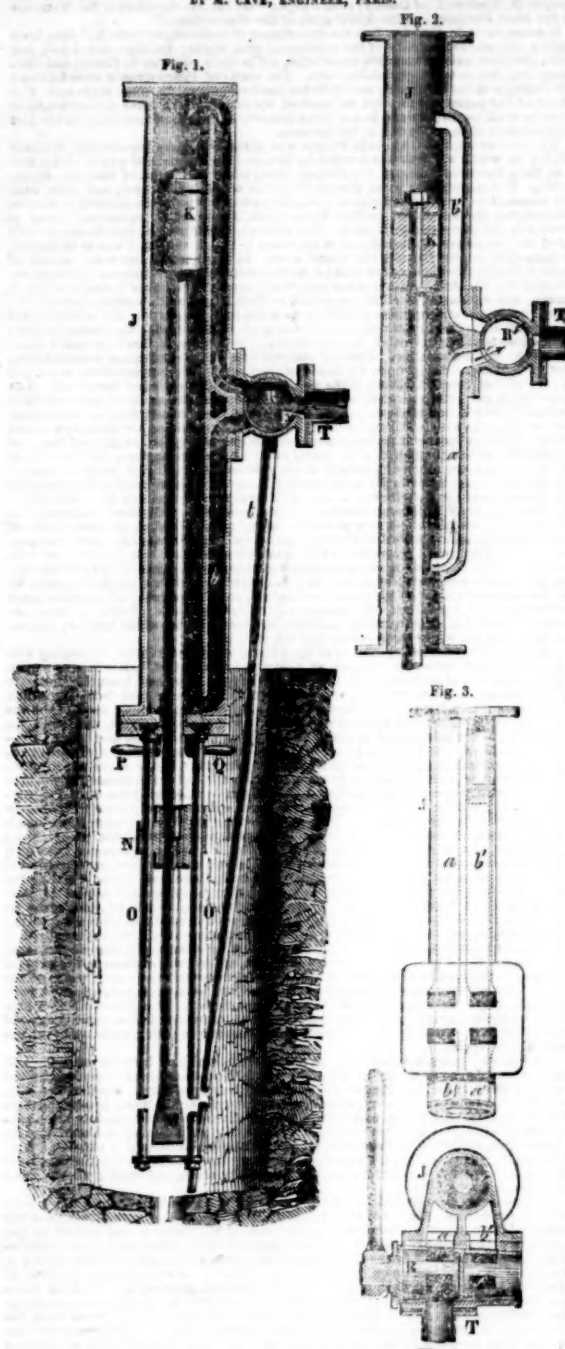
**MANUFACTURE OF GAS.**—Mr. W. S. Losh, of Wreay Syke, near Carlisle, has patented some improvements in the purification of coal gas; they consist mainly in the application of chloride of lead to the purification of coal gas. The substance in which this substance is used is as follows: The chloride of lead is reduced to powder and mixed with an equal bulk of coarsely powdered coke, or of sawdust, in order to allow the gas to move readily through it. The mixed materials, in a damp state, are then laid upon the shelves of an ordinary dry lime purifier, and when the purifier is charged the gas is turned on, and in passing through the chloride of lead and coke, or sawdust, is deprived in a great measure of its ammonia and sulphurous components, which are decomposed and remain in combination with the chloride of lead, while the purified gas passes on to the place where it is required for use. Two such purifiers are used in conjunction, and when one ceases to act the gas is turned on to the second, while the former one is being re-charged, and so on alternately. In order to restore the saturated chloride of lead to a fit condition to be again used, it is well washed, in order to separate the ammonia, sulphur, &c., which are evaporated to dryness, and is then passed through a brake sieve, in order to rid it of the coke or sawdust which may have been used; after which the lead is treated with hydrochloric acid and converted to a chloride, which may be again used.—*Mech. Mag.*

**PERPETUAL MOTION.**—Mr. Peter K. Fisher, of Schuylkill county (U. S.) claims having completed a draft of certain machinery, which he conceives will produce perpetual motion, the motive power being leverage, weight, and pressure. The inventor is quite sanguine as to the ultimate success of his invention—as hundreds have been before him.

**ROYAL POLYTECHNIC INSTITUTION.**—One 100*l.* share in this property, has been sold by auction for 83*l.*



# STEAM BORING-MACHINE FOR MINES, QUARRIES, &c., BY M. CAVÉ, ENGINEER, PARIS.



The reputation of M. Cavé as an engineer is well known, and he has lately turned his attention to the subject of boring, for mining and similar purposes, by steam or other power. Those of our readers who are practically acquainted with mining operations are well aware of the importance of the subject, and of the great mechanical system, as a substitute for manual labour, would confer both on the working miner and the adventurer. In hard ground, the expense of sinking a shaft or driving a level is almost incredible. The presence of impure air, the confined space, and the want of light, all combine to limit the efficiency of the miner, whilst the impossibility of more than three or four men working at one end prevents the work being pushed forward with any greater rapidity, however important the object to be gained may be, and however little the cost may be of consequence. In metal mines, the cost of extraction does not bear so large a proportion to the value of the material raised as it does in coal mines; and attempts have been made in the latter to use circular revolving cutters, so as to bring out the coal in rectangular masses, which would increase its value in point of storage, and also, we are inclined to think, preserve its evaporating powers. There is a very manifest deterioration in the quality of coal when it has been broken up and exposed to atmospheric influences, which immediately occurs to a person visiting a coal district, and witnessing for the first time the rapidity and brilliancy with which the fresh raised coal inflames.

For the great majority of mining, quarrying, and tunnelling operations, boring and blasting is employed; and it is for this object that M. Cavé's machinery is designed. It consists of a cylinder and piston, actuated by steam, compressed air, or by the vacuum system, the cutting tools being attached to the piston-rod, and acting by percussion. It thus resembles a Nasmyth's steam-hammer; and a similar means is employed to destroy the momentum of the piston, by enclosing a portion of steam or air, which acts as a cushion at each end of the cylinder. To carry out this purpose, the inlet and exhaust passages are kept quite distinct, as will be seen on reference.

Fig. 1 is an elevation of the machine in section through the inlet passages; Fig. 2 is an elevation of the cylinder in section through the outlet passages; Fig. 3 is a front elevation, showing the passages; and Fig. 4 is a plan in section through the passages. J is the cylinder, containing the piston, K, to the rod of which is attached a cross-head, N, to which is also fixed the chisel, M. The cross-head and chisel are guided by the guide-rod, O O, which are fixed in a plate dovetailed into the cylinder cover, in such a manner that it can be freely turned round (with the piston) by means of the handles, P Q, and thus enable the chisel to take a fresh cut at every stroke, without which it would jam. The annexed sketches show the shape of the chisel and its cutting edge. The admission and emission of the compressed air or steam is regulated by a four-way cock, R, supplied by a pipe, T, as shown in Fig. 1. The air is admitted through the inlet passage, a, on the top of the piston, which will rapidly descend, until it passes the outlet, a' (Fig. 2), when the escape of air being prevented, the piston is stopped by the air-cushion. On the up-stroke, the cock having been turned, the compressed air enters by the passage, b, and escapes by the passage, b'. It will be observed that the plug of the cock is divided transversely by a diaphragm, shown in Fig. 4, to keep the passages distinct, c and d answering to the two inlet passages, and e and f to the two outlets. The air which escapes from the cylinder is led by the pipe, t, to near the point of the chisel, and will have the effect of blowing away the small chips loosened by it.

The machine is shown in the engraving as working vertically; but it could obviously be applied to driving a level, by placing it horizontally, and mounting it on a carriage. If it be desired to bore a hole of larger diameter than the width of a chisel, the cutter can be fixed at any desired distance from the centre of the piston rod, the revolution of which will cause the cutter to describe a circle of corresponding diameter. For sinking shafts, a number of cylinders might be employed simultaneously, working a sufficient number of chisels to extend round the shaft; and the same arrangement applied horizontally would serve to drive a level. In vertical boring, the chisels have to be regularly withdrawn, in order to permit of the extraction of the debris; but we do not find that the inventor has provided any special means for effecting this object. He has suggested that electro-magnetic power may be applied to work this machinery; but air appears to offer the most tangible advantages. It can be conducted a great distance without suffering condensation, as steam does; and it would materially improve the atmosphere of the mine, by blowing in fresh air, or, if worked on the vacuum system, it would be equally advantageous in coal mines, by serving to draw off the fire-damp. Although M. Cavé has patented this arrangement, we are not aware if it has been practically applied. We foresee some difficulties, but we apprehend they are not beyond the ingenuity of our Cornish miners to overcome.

[We are indebted to the Editor of the *Artisan* for this paper, and the accompanying illustrations.]

**IMPROVED STONE SAWS.**—Mr. A. Eames, of Springfield, Massachusetts, has obtained a patent for a saw on a novel principle for cutting stone. The middle portion of the blade is formed of a slab of iron, into which a quantity of the sand used becomes embedded, forming a rubber to wear the sides smooth; while the edge being made of steel, or iron, continues cutting, and keeps the kerf of the requisite width.

**NEW IRON-WORKS.**—On the 22d inst. the foundation of three blast-furnaces was laid about half a mile below Middlesbrough Dock. They are the property of Messrs. Gilkes, Wilson, and Co.; and it is anticipated that several more furnaces will be required shortly. Mr. Thomas James, of Merthyr Tydfil, Glamorganshire, will superintend the construction of these works. *—Sunderland Herald.*

## PORTLAND IRON COMPANY, SCOTLAND.

Conducted on the "Cost-book Principle."—No Deed to Sign.

50,000 parts, or shares, of £3 each, paid in full.

**BOARD OF MANAGEMENT.**  
WILLIAM STRAHAN, Esq., Strand, London.  
JAMES REID, Esq., Gresham-street, London.  
JOHN SMITH, Esq., Bow Church-yard, London.  
JAMES THOMAS COCKNEY, Esq., Lamb's Conduit-place, London.  
(With power to add to their number.)

**BANKERS.**—Messrs. Strahan, Paul, and Bates, Strand, London.  
BROKER.—A. L. Bellinger, Esq., St. Michael's-alley, Cornhill, London.  
SECRETARY.—Mr. Joseph George.

**OFFICES OF THE COMPANY.**—AT THE WORKS, NEAR KILMARNOCK, SCOTLAND; and 17, GRESHAM STREET, LONDON.

The Portland Iron-works are situated within two miles of the town of Kilmarnock, and within 12 miles of the shipping port of Troon, to which there is a railway direct from the works.

The plant consists of blowing engines, three blast-furnaces, foundation for a fourth, boilers, engine-houses, clay-mill, brick-kilns, 11 other engines, boilers, pumps, and apparatus, work-shops, four miles of railway, and rails complete, and one mile of extra rails, with furnace bank, and several hundred tons of plate-iron thereon, besides nearly 100 houses and cottages.

The Ironstone Fields consist of about 5000 acres, nearly 2000 of which contain the celebrated Black Band Ironstone, varying from 14 to 24 inches in thickness, and of the first-rate quality. The remaining 3000 acres contain a large quantity of coal and ironstone, and, no doubt, the Black Band also.

The coalfield consists of 700 acres, and contains an inexhaustible supply of coals, having three seams of the first class, of upwards of 20 feet in thickness, besides an immense supply of fire-clay.

Four blast-furnaces will be in full work in a few months, being fully sufficient to produce 30,000 tons of pig-iron in the year, which, at the present price of iron, would realise a net profit of 20s. per ton, or £30,000 per annum; 3s. 4d. only per ton profit being equal to £5000 per annum, sufficient for a dividend of 3 per cent.; and there is no doubt one or two very handsome dividends will be paid next year, with regular dividends afterwards.

The class of iron hitherto made at these works has always commanded the highest price, and they will have the extraordinary advantage of a coal-pit within a few yards of the furnaces, thus avoiding the great loss often arising from the inability to get coals; besides which a superior bed of fire-clay is worked on the estate.

There has been nearly £100,000 laid out upon the works. Nevertheless, the Board of Management will, with the proposed capital, be able to purchase the entire property, erect four additional blast-furnaces, and put the works into perfect order.

The extraordinary demand for iron from America, India, and other foreign parts, must, of necessity, keep up its price for years to come.

12,500 shares have already been subscribed for; and as the proprietors take 12,500 more in part of their purchase money, only 25,000 remain to be allotted to the public.

Prospectuses, with full particulars, can be had of the broker, A. L. Bellinger, Esq.; or of the secretary, at the company's office, London, to either of whom applications for shares must be made according to the form below.

### FORM OF APPLICATION FOR SHARES.

Portland Iron Company.—To the Board of Management of the above Company.

GENTLEMEN,—I request you will insert my name as a subscriber for \_\_\_\_\_ parts, or shares, in the above company; and I hereby undertake to accept the same upon the rules and regulations to be entered in the Cost-book of the said Company, and to pay the sum of £2 on each share when required by your letter of allotment.

Your obedient servant,  
Name in full \_\_\_\_\_  
Description \_\_\_\_\_  
Residence \_\_\_\_\_

Referee and address \_\_\_\_\_

### LONDON (WATFORD) SPRING WATER COMPANY.

TO BE INCORPORATED BY ACT OF PARLIAMENT.  
Which will limit the liability of the shareholders, and in respect of which the plans, sections, and books of reference, have been duly deposited, in compliance with the Standing Orders of Parliament.

[Provisionally registered under the Act 7 & 8 Victoria, cap. 110.]

Capital £400,000, in 16,000 shares of £25 each.

Of which £1 7s. 6d. per share will be payable on signing the Parliamentary Contract, and no further call will be made until the Act has been obtained.

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HENRY THOMAS HOPE, Esq., 116, Piccadilly; and Deerpence, Dorking, Surrey.

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Sir ROBERT PRICE, Bart., M.P., 11, Stratton-street, Piccadilly; and Foxley, Herefordshire.

WILLIAM R. ROBINSON, Esq., 21, Austinfrs.; and Hill House, Acton.

JAMES WARREN, Esq., 96, Houndsditch; and Chapel House, Enfield.

(With power to add to their number.)

ENGINEER.—Samuel Collett Homersham, Esq., 19, Buckingham-street, Adelphi.

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Sir Samuel Scott, Bart., & Co., 1, Cavendish-sq.; Messrs. Currie & Co., 29, Cornhill.

SECRETARY.—Benjamin Rankin, Esq.

### TEMPORARY OFFICES.—30, MOORGATE STREET.

The object of this company is to supply, at a cheap rate, the inhabitants of the cities of London and Westminster, and the boroughs of St. Marylebone and Finsbury, and the following places intermediate between those and the source of supply, namely, Barnet, Bushey, Edgware, Elstree, Finchley, Hadley, Hampstead, Harrow on the Hill, Harrow Weald, Hendon, Kingsbury, Mill Hill, Pinner, Stanmore, Sudbury, Tottenham, Watford, Whetstone, Willesden, with pure soft spring water, procured from Bushey Meadows, near Bushey, in the parish of Bushey, in the county of Middlesex, so that upon the mere turning of a tap it may be got fresh from the mains, without the intervention of a cistern, even in the top stories of the highest houses.

At a charge of from one-third to one-half less than the charges of the Grand Junction and West Middlesex Water Companies, a dividend of 10 per cent. would be returned upon the capital expended to carry out the undertaking.

Applications for shares to be made, addressed to the secretary of the Company, at the offices, 30, Moorgate-street; or to Messrs. Johnson, Longden, and Co., stock-brokers, Tokenhouse-yard, where detailed prospectuses and forms of application for shares may be obtained.

### PRELIMINARY ANNOUNCEMENT.

#### ANGLO-AUSTRALIAN AND GOLD MINERS' MUTUAL LIFE ASSURANCE COMPANY.

Provisionally registered, and to be incorporated by Royal Charter.

Capital Fund £150,000, in 15,000 shares of £10 each.—Deposit 1s. per share.

First call, £1 per share, on full registration.

The paid-up capital to bear interest at the rate of 10 per cent.

This Company is formed with the view of more effectually extending the advantages of LIFE ASSURANCE to the increasing requirements of EMIGRATION, and especially of adapting its benefits to the necessities of the vast community of gold miners, and to the necessities for the introduction of such a company.

The wide field of the Company's operations, and the peculiar sources of profit, warrant the directors to expect a very large return to the shareholders, in addition to their interest of 10 per cent., while the policy holders will derive considerable profits from the working of the funds. "The value of money in South Australia is still from 15 to 25 per cent. per annum."—See the *Times*, Nov. 11, 1852.

Applications for shares (in the usual form), prospectuses, agencies, &c., to be made to the secretary, at the offices of the company. J. NEWTON, English Sec.

Offices, 38, Moorgate-street, London.

### CLERICAL, MEDICAL, AND GENERAL LIFE ASSURANCE SOCIETY.

#### ADVANTAGES.

EXTENSION OF LIMITS OF RESIDENCE.—The assured may reside in most parts of the world without extra charge, and in all parts by payment of a small extra premium.

MUTUAL SYSTEM WITHOUT THE RISK OF PARTNERSHIP.

The small share of profit divisible in future among the shareholders being now provided for, without trenching on the amount made by the regular business, the assured will hereafter derive all the benefits obtainable from a Mutual Office, with, at the same time, complete freedom, responsibility, secured by means of an ample proprietary capital—thus combining in the same office all the advantages of both systems.

The assurance fund already invested amounts to £250,000, and the income exceeds £130,000 per annum.

CREDIT SYSTEM.—On policies for the whole of life, one half of the annual premiums for the first five years may remain on credit, and may either continue as a debt on the policy, or may be paid off at any time.

LOANS.—Loans are advanced on policies which have been in existence five years and upwards, to the extent of nine-tenths of their value.

BONUSES.—FIVE BONUSES have been declared; at the last in January, 1852, the sum of £131,125 was added to the policies, producing a bonus varying with the different ages from 24s. to 55s. per cent. on the premiums paid during the five years.

PARTICIPATION IN PROFITS.—Policies participate in the profits in proportion to the number and amount of the premiums paid between every division, so that if only one year's premium be received prior to the books being closed for any division, the policy on which it was paid will obtain its due share. The books close for the next division on 30th June, 1853, therefore those who effect policies before the 30th June next will be entitled to one year's additional share of profits over later assurers.

APPLICATION OF BONUSES.—The next and future bonuses may be either received in cash, or applied at the option of the assured in any other way.

NON-PARTICIPATING.—Assurances may be effected for a fixed sum at considerably reduced rates, and the premiums for term policies are lower than at most other safe offices.

PROMPT SETTLEMENT OF CLAIMS.—Claims paid 30 days after proof of death, and all policies are indisputable, except in cases of fraud.

INVALID LIVES may be assured at rates proportioned to the increased risk.

POLICIES are granted on the lives of persons in any station, and of every age, and for any term, on one life from £50 to £10,000.

PREMIUMS may be paid yearly, half yearly, or quarterly, but if a payment be omitted from any cause, the policy can be revived, within 14 months.

The accounts and balance sheets are at all times open to the inspection of the assured, or of persons desirous to assure.

A copy of the last report, with a prospectus and form of proposal, can be obtained of any of the society's agents, or will be forwarded free by addressing a line to

GEORGE H. PINKARD, Resident Secretary,

99, Great Russell-street, Bloomsbury, London.

## DRAWINGS OF A SYPHON FOR RAISING WATER FROM MINES BY A SUCCESSION OF SYPHONS.

COPIES of these drawings may be obtained at the office of T. Z. Mein, 63, North Bridge, Edinburgh, upon payment of One Shilling each copy, which may be transmitted in postage stamps. These drawings show a working plan of a siphon, and the manner of connecting them, with illustrations. It is expected the siphon will be exhibited in the Crystal Palace about to be opened in London. T. Z. Mein, 63, North Bridge, Edinburgh.

## NEW HOUSES OF PARLIAMENT.—DEFRIES' GAS STOVE RANGES, AND BATHS, just completed for two kitchens in the above building.

A great variety in stock upon the same principle. GAS BATHS from £7, which a warm bath may be obtained for 14d. GAS COOKING AND HEATING STOVES for all classes, from 41. Defries' celebrated DRY GAS METERS, &c., in use. Testimonials at the office, 145, Regent-street.—Manufacturers, and agents in Hampstead-road and St. Martin's-lane to more extensive premises, 2, Broad, St. Albans-street.

## THE WASHINGTON CHEMICAL COMPANY, NEWCASTLE-ON-TYNE; MANUFACTURERS OF

### PATTINSON'S OXICHLORIDE OF LEAD.

The WASHINGTON CHEMICAL COMPANY having, during the last year, ESTABLISHED A MANUFACTORY OF PATTINSON'S OXICHLORIDE OF LEAD on a large scale, and being able to supply it with regularity, and to execute orders without DELAY, now proceed to bring this new and valuable preparation of lead before their friends and the public, quite sure that it will not, in the present age, be condemned because it is new, and that if judged of by its merits, it must "make its way" and finally take its place as one of the important manufactures of the country.

PATTINSON'S OXICHLORIDE OF LEAD is a chemical combination of one equivalent of chloride of lead and one equivalent of oxide of lead; it being well known that common white lead is a chemical combination of one equivalent of oxide of lead and one equivalent (or thereabouts) of carbonic acid, constituting what is called chemical language, carbonate of lead. Now, there is no reason to conclude that carbonate of lead is the only compound of lead valuable as a paint, and still less that it should be the best compound of lead for that purpose. In point of fact it is not so, for a newly-discovered oxichloride of lead, in most, if not in all respects, is far superior; its color is brilliantly white, and in a number of cases it has been tried against the best white lead that could be obtained, and after a period of upwards of two years, it has been found to retain its white colour considerably better than the lead against which it was tried. But the chief and by far the most important advantage it possesses is its remarkable and very decided superiority of body, by which term the power of covering surface well and extensively is understood among painters. The attention of the discoverer was at a very early period drawn to this circumstance, and since that time the Washington Chemical Company have had abundant opportunities of placing its superiority in this important particular beyond all doubt. They have themselves performed a number of experiments, and have also caused a number of experiments to be performed, in the large way, by various practical men, to ascertain accurately its covering power as compared with the best white lead, and they now state the proportions to be as 60 to 100—that is, 60 lbs. of oxichloride paint will cover as much surface as 100 lbs. of the best white lead, the saving of cost being in the same proportion; besides this, the coating is thicker and more protective, both in and out doors, as the oxichloride dries into a hard tenacious layer, more like an enamel than paint. In using the oxichloride, no difference is to be observed in the manner in which it is required, oil and turpentine being employed as usual both for work technically called "battling" and for work intended to be varnished. For the use of paper stains and leather dressers, the oxichloride is found to be peculiarly suitable. The Washington Chemical Company strongly recommend this newly-discovered substance to the notice of consumers, both on account of its economy and its intrinsic good qualities as a paint.

AGENTS.

LONDON.—Mr. Richard Cooke, 7, St. James-street.

Messrs. Blundell, Spence, and Co., 9, Upper Thames-street.

LIVERPOOL.—Messrs. Johnson and McGowan.

MANCHESTER.—Mr. James Douglas.

LEEDS.—Messrs. T. and E. G. Jepson.

SUNDERLAND.—Mr. John Young.

DEVONSHIRE AND CORNWALL.—Mr. Richd. Penrose, Tavistock & Plymouth.

EDINBURGH AND EAST COAST OF SCOTLAND.—Mr. William Bailey, jun., Green-side-place, Edinburgh.

GLASGOW AND WEST COAST OF SCOTLAND.—Mr. John Hinchay, Glasgow.

DUBLIN AND SOUTH OF IRELAND.—Mr. F. Linsey, No. 91 Middle Abbey-street, Dublin.

BELFAST.—Messrs. William Stevenson, jun., and Co.

### E. J. DENT HAS REMOVED FROM 82 TO 61, Strand (being 21 doors nearer to Charing-cross, and directly opposite Bedford-street), and solicits AN INSPECTION of his extensive STOCK OF CHRONOMETERS, WATCHES, AND CLOCKS, as above; also at No. 33, CUCKSPUR-STREET, and No. 34, ROYAL EXCHANGE (Clock Tower area).

### GREGORY'S HOTEL, No. 29, CHEAPSIDE, LONDON.

Bed, 1s. 6d.; Breakfast, 1s. 6d.; Servants, 6d. per day. Omnibuses to and from all the Railway Stations set down at the door.—Gentlemen connected with the MINING INTEREST are particularly invited to patronise this Hotel.

WELLINGTON GREGORY, Proprietor.

### GLASGOW MERCANTILE ADVERTISER (MOODY'S SHIPPING AND COMMERCIAL GAZETTE, IMPORTS, EXPORTS, AND PRICES CURRENT, INCORPORATED WITH THE NATIONAL PROPERTY LIST).

The proprietor of this paper has the pleasure of announcing to subscribers and to the public, that owing to the extensively-increased demand for the *Mercantile Advertiser*, at home and abroad, which has of late so decidedly manifested itself, the COLUMNS of the paper, commencing with the next Number, will be so EXTENDED, as to embrace much more fully the Trade of Glasgow and the Shipping of the Clyde.

The *Mercantile Advertiser* will include the NATIONAL PROPERTY LIST, with which it will in future be incorporated. An arrangement so desirable will vastly contribute to render the paper a most complete weekly business document; and to constitute the file of the paper, now on the desk of nearly all the leading mercantile houses, the constant companion of the ledger and the cash-book. The columns of the *Mercantile Advertiser*, with its extended circulation, will then be by far the most efficient weekly medium for BUSINESS ADVERTISEMENTS of every description.

Annual subscription, 20s., delivered in town, or 25s., sent by post; single copies, 6d., or 6d. if stamped.—Post-office Orders addressed to Andrew Moody, 13, Royal Exchange-square.—*Mercantile Advertiser* Office, Glasgow, Jan. 1, 1853.

Under the immediate sanction and patronage of H. R. H. PRINCE ALBERT, K.G., Lord Warden of the Stannaries, Chief Steward of the Duchy of Cornwall and Devon.

On the 1st February, 1853, will be published, price 2s. in boards, and 3s. 6d. cloth lettered, containing upwards of 350 pages.

THE MINING MANUAL: edited and compiled by HENRY ENGLISH, F.G.S., A.C.E., M.E., Editor of the *Mining Review*, *Mining Journal*, &c., &c., embracing, in addition to Statistical Returns and Tabular Matter, an Original Article on the Cost-book System and its Application—A Review of the Old and New Patent Laws—Glossary of Mining Terms—Tables of Calculation—Names and Offices of the respective Companies, with every detail connected therewith, and having reference to the Mining and Mining Operations. In addition to other important subjects, Original Papers and Reports of the Gold Districts of Australia and California, obtained from authentic sources, with a digest of the Prospectuses and Reports of the several Mining Companies, furnished exclusively to the Editor. Communications to be addressed to the Editor, 25, Fleet-street, or on or before the 10th January, 1853.

Published by Simpkin, Marshall, and Co., Stationers' Hall-court, and at the office, 25, Fleet-street.

### BLAKE AND PARKIN, MEADOW WORKS, SHEFFIELD.

MANUFACTURERS OF CIRCULAR AND MILL SAWS, IMPROVED CAST-STEEL FILES, for the use of engineers and machinists, PATENT TEMPERED MACHINE KNIVES AND CUTTERS, manufactured for planing and grooving wood, for cutting paper, iron, stone, leather, &c., made to any pattern or dimensions with the utmost exactness. Warranted to work with a harder and finer edge than any other mode of temper.

INVENTORS OF COKE-ANNEALED CAST-STEEL for taps, piston-rods, &c.—MANUFACTURERS OF RAILWAY SPRINGS, BLISTER, SHEAR, and CAST-STEEL, &c.

### IMPROVED LIFTING JACKS.

MANUFACTURED BY

W. AND J. GALLOWAY,

PATENT RIVET WORKS,

MANCHESTER.

The attention of parties who employ

Lifting Jacks,

Is respectfully requested to the superiority of those annexed, over those hitherto in use.

KERR AND STRANG, PERFUMERS AND WIG MAKERS, 124, LEADENHALL STREET, LONDON, respectfully inform the nobility and public, that they have invented and brought to the greatest perfection the following articles, besides numerous others:—THEIR VENTILATING NATURAL CURE; LADIES



**NOTICE.—TO MERCHANTS, MINERS, and all OTHERS interested in the PRODUCTION OF GOLD OR SILVER, either in Australia, California, North and South America, Great Britain, or any other part of the world.**—I beg to announce, that I am at all times a PURCHASER of GOLD, in gossan, quartz, or other matrix, which contains 5 per cent. of gold or upwards; and of SILVER, in any form, which yields 15 per cent. of silver or upwards. My operation is exclusive, as my process avoids altogether the expense of crushing and other preparation, and consequently, it is of vast importance to all mining undertakings, but more particularly to those who have to pay exorbitantly for labour. BENJAMIN MASSEY, 110, Leadenhall-street, London.

**COBALT AND NICKEL.—ALFRED SENIOR MERRY, REFINER AND PURCHASER OF COBALT AND NICKEL ORES, and ASSAYER IN GENERAL.**—Address, LEE CRESCENT, BIRMINGHAM.

**NICKEL AND COBALT REFINING, and GERMAN SILVER.**—MERRY, MILL STREET, BROAD STREET, BIRMINGHAM.—STEPHEN MERRY begs to inform the Trade that he has the following articles for sale: REFINED METALLIC NICKEL. OXIDE OF COBALT. WIRE. REFINED METALLIC BISMUTH. GERMAN SILVER—IN INGOTS, SHEET, NICKEL AND COBALT ORES PURCHASED.

**GOLDENHILL COBALT, NICKEL, COLOUR, and CHEMICAL WORKS, NEAR NEWCASTLE, STAFFORDSHIRE.** JOHN HENSHALL WILLIAMSON, MANUFACTURER AND REFINER. Reference.—Professor Miller, King's College, London.

**LOSH, WILSON, and BELL, NEWCASTLE-ON-TYNE, MANUFACTURERS OF BAR-IRON, RAILWAY BARS, FORGE and ENGINE WORK, CAST-IRON GOODS, and STEWART'S PATENT CAST-IRON GAS and WATER PIPES.** OFFICE, 7, SISE LANE, LONDON.

**PATENT GALVANIZED IRON-WORKS, SHADWELL STREET, BIRMINGHAM.**—IRON WIRE, SHEETS, TUBING, and every description of WROUGHT and CAST-IRON WORK GALVANIZED by most experienced hands. Prices forwarded on application.—William Phillips and Co., Proprietors. N.B. The above process effectually preserves from rust.

**TO MASTERS, MINERS, FOUNDRERS, ENGINEERS, &c.** MR. THOMAS WALTERS, PROPRIETOR OF ANTHRACITE COAL, for melting and marine steam-engine purposes; and CULMS, for limestone and chalk burning. SUPERIOR MINING COALS. Swansea, Dec. 11, 1852.

**MESSRS. JOHNSON and MATTHEY** beg to inform MERCHANTS and IMPORTERS of ORES that they have taken the SUFFRANCE WHARF and WAREHOUSE at MILLWALL, known as "MELLISH'S SUFFRANCE WHARF," extending from the RIVER THAMES to the FERRY-ROAD, and erected STEAM-ENGINE and MACHINERY for CRUSHING and GRINDING GOLD QUARTZ, SILVER, LEAD, and OTHER ORES, and having such properly mixed and sampled for sale; they are also erecting FURNACES and APPARATUS for REDUCTION OF ORES OF CERTAIN CLASSES, on much improved principles. The management will be under a gentleman who has had very great experience, who will reside on the premises, and act under the immediate supervision of Messrs. Johnson and Matthey. The ore floors and warehouses are well secured, and only those persons engaged in the operations who are well qualified, and of known respectability of character.

The want of such an establishment for the Port of London has been long felt, and Messrs. Johnson and Matthey feel confident of giving satisfaction to those who confide in their care.—Office, 79, Hatton-garden, London, July 28, 1852.

**MR. LEEAN TRANSACTS, for principals, BUSINESS IN HOME and FOREIGN MINES, including Australian, Californian, North and South American, Imperial Brazilian, Coahuila, Linares, &c.** Also, BUYS and SELLS every description of RAILWAY, BANKING, INSURANCE, GAS, WATER, and STEAM COMPANIES' SHARES, BONDS, and DEBENTURES. Mr. LEEAN would particularly recommend to the notice of capitalists the AUSTRALIAN GOLD SHARES; and having peculiar sources to obtain certain information of the present state and future prospects of some of the best companies, he is in a position to point out those he considers most promising at the present time. Parties wishing for secure INVESTMENTS, ranging from 5 to 20 per cent., can have the ADVICE of a gentleman upwards of 20 years a writer on and connected with the Money Market. Price lists and information, through the medium of the post, to parties resident in any country.—76, King William-street, City.

**MR. CHARLES POWELL, MINING SHARE BROKER, No. 35, KING STREET, STONEHOUSE, DEVON.**—MR. C. POWELL OFFERS HIS SERVICES to the Public for the PURCHASE or SALE of MINING SHARES on the usual terms of commission.

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CORNWALL.	DEVON.
Wheal Golden, Perranzabuloe.	Yeoland Consols.
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Caradon Wood, Llanthorne.	West Carpenter.
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West Wheel Edward, Calstock.	Wheal Sidney, Plympton.
Wheal Langford, Callington.	Devon and Courtenay, Tavistock.
Bell and Lanarth, Gwennap.	North Tamar, Tavistock.
Stoke Clinaland Consols, Stoke Clinaland.	Gawton United, Tavistock.
Stoke Clinaland Consols West.	Tavy Consols, Tavistock.
Gonamena, St. Cleer.	East Wheel Russell, Tavistock.
Hingston Down Consols.	Wheal Russell, Tavistock.
SOMERSET.	New East Crowndale, Tavistock.
Exmoor Eliza, near South Molton.	Devon Kapunda, St. Sydenham, Tavistock.
Molland, near South Molton.	Wheal Sarah, Sourton.

December 31, 1852.

**MR. THOMAS BROWN, MINE SHARE BROKER, RIDGWAY, PLYMPTON, DEVON,** has SHARES FOR SALE in Devon Mines of great promise, now in full operation, including Yeoland Consols, Bottle Hill, Boringdon Consols, Wheal Sidney, Tavy Consols, Devon and Courtenay, Gawton United, Exmoor, &c. N.B. All reports may be obtained on application to Mr. Thos. Brown, at his office.

**MESSRS. MOLYNEUX and CO., 114, BISHOPSGATE-STREET WITHIN, OPPOSITE CROSBY HALL CHAMBERS, and 10, BUCKINGHAM-STREET, ADELPHI.**—Offices of the Wheal Fortune (South Tawton), Great Wheal Tomkin (Callington), Wheal Henry (Paul, Cornwall), Fursdon Manor Mine (St. Tawton, Devon), &c.

**MINING INVESTMENT.—T. FULLER and CO., 51, THREADNEEDLE-STREET, LONDON,** beg to call attention of their friends and the public to the most important discovery of copper ore in the kingdom, from the large quantities of malachite ore taken 20 ft. from surface, resembling in character the Burra Burra in Australia, and worth £20 per ton; and from the immense size of the lode, being 30 ft. wide, its perfect formation, with an abundance of the finest gossan, together with the important geological features of the strata, must be conclusive of the existence of an abundance of mineral, 40 tons of which have already been taken from a comparatively shallow depth, and now lying on the floors. T. FULLER and CO., 51, Threadneedle-street, London, has a FEW SHARES in this valuable MINE FOR SALE, application for which, with full particulars, can be made either personally or by letter.

**NORTH BRITAIN BURRA BURRA COPPER MINE.**—The certificates in the Company are made to bearer, therefore no stamp, transfer, or registration is necessary, and no Deed has to be signed.

This important MINE, having created considerable excitement and attention among the most experienced and practical mineralogists of the day, who all concur in pronouncing it to be the most important discovery of copper ore in the kingdom, from the large quantities of malachite ore taken 20 ft. from surface, resembling in character the Burra Burra in Australia, and worth £20 per ton; and from the immense size of the lode, being 30 ft. wide, its perfect formation, with an abundance of the finest gossan, together with the important geological features of the strata, must be conclusive of the existence of an abundance of mineral, 40 tons of which have already been taken from a comparatively shallow depth, and now lying on the floors. T. FULLER and CO., 51, Threadneedle-street, London, has a FEW SHARES in this valuable MINE FOR SALE, application for which, with full particulars, can be made either personally or by letter.

**MINING RECORD OFFICE, 26 AUSTINFRIARS, LONDON.**—MR. MANUEL'S OFFICES are expressly for the USE of COMMITTEES and COMPANIES conducting their BUSINESS in LONDON, and entirely free from share dealing. MR. MANUEL will be happy to CONDUCT the LONDON AGENCY of any MINES now at work, or about to be worked, he having spacious and convenient OFFICES for that PURPOSE.—Terms on which the business is conducted to be had on application, either by letter or in person. Sixteen years' experience will enable Mr. Manuel to give suitable advice on all occasions.—Offices of the West Wheel Rose, West Callington, Busparvo, Galitz-Maen, Great Crinnis Consols, Union Tin, &c.

**MESSRS. TREDINNICK and CO., AUCTIONEERS, STOCK and SHAREBROKERS, and DEALERS in MINING and OTHER PROPERTY, 6, HAYMARKET, and 12, ST. MICHAEL'S-ALLEY, CORNHILL, LONDON;** and MR. JOSEPH TREDINNICK, Stock and Sharebroker, Mine Inspector, and Machinist, HAYLE, CORNWALL.—Mines pay from 12½ to 15 per cent. per annum; and Messrs. TREDINNICK and CO. are at all times in a position to BUY and SELL in all the above and promising MINES. The Weekly List of Prices, and Circular of Mining Information, to be had upon application, of Messrs. Tredinnick.

**MR. ROBERT TRIPP, MINING AGENT, has for BONA FIDE SALE SHARES in the BEST DIVIDEND MINES; also in PROGRESSIVE ONES, which will shortly pay dividends—viz., Alfred Consols, Conduvor, North (Gwennap), East Pool, Devon Great Consols, Bottalack, Carn (Trelawny), Mary Ann, West Providence, Wheal Golden, Harriett, Sidney, Aphin, Bedford United, Speedwell, Great Alfred, Mendip Hills, North Buller, &c. &c. &c. East Wheel Vor, Penbrook and Crinnis, Leeds Town Consols, Charlotte, Union, Peru, Wheal Lemon, Arthur, Brewer, South Basset, Cabert, East Wheel Russell, Bodmin Consols, Crebor, South Carn Brea, &c. Foreign: Coahuila, Linares, St. John del Rey, Colbre, &c.; and in the Californian and Australian "gold" shares. Every information, the most authentic and respectable, obtained from the mining districts. Mining Offices, St. Michael's-chambers, St. Michael's-alley, Cornhill, London.**

## BRUCUTU GOLD MINING COMPANY.

**EMPIRE OF BRAZIL.** Capital £25,000.—In shares of £1 each, fully paid up. Of which 17s. 6d. per share will be returned to the shareholders, if upon the report of a trial, to be made by competent mining engineers, it should be determined not to proceed with the adventure.

**ON THE COST-BOOK PRINCIPLE.—No Deed necessary to be signed.**

**COMMITTEE OF MANAGEMENT.** GEORGE VINCENT DUVAL, Esq., Deputy Chairman of the Imperial Brazilian Mining Association. JOHN GARDINER, Esq., Director of the Sovereign Life Assurance Company. ROWLAND G. ALSTON, Esq., Director of the Phoenix Life Assurance Company. Rev. J. BARRETT, M.A., Chairman of the Athenium Life Assurance Company. JOSEPH TULLY, Esq., of Rio de Janeiro, and Conduit-st. West, Westbourne-terr. (With power to add to their number.)

**BANKERS.—Messrs. Heywood, Kennard, and Co., Lombard-street.**

**AUDITORS.** W. Goodchap, Esq., actuary and accountant; G. Thomas, Esq., Winchester House. Solicitors.—Messrs. Tucker and Sons, Sun Chambers, 61, Threadneedle-street. STOCK BROKERS.—Messrs. Carden and Whitehead, 2, Exchange-buildings.

**MINING AGENT IN BRAZIL.**—Capt. Wm. Verran, late chief mining captain at the St. John del Rey Mine of Morro Velho.

**AGENTS IN RIO DE JANEIRO.**—Messrs. Joseph Tully and Co.

**TEMPORARY OFFICES.**—No. 38, OLD BROAD STREET.

This company is formed for the purpose of purchasing and working the mining property of Brucutu, in the province of Minas Geraes, in the Empire of Brazil. Applications for shares and prospectuses to be made to the brokers, and at the temporary offices of the company, where may be seen a large map of the estate, the reports, and specimen of the ore.

## LA PERUVIENNE GOLD WASHING COMPANY OF CARABAYA, IN PERU.

Constituted under the laws of Peru, and established in France as a "Société en commandite," for a duration of 99 years. Capital £150,000, in 150,000 shares of 25 fr., or £1, each, to be paid (au porteur), payable on allotment, without any further liability.

**GERANT.—M. H. De Varnaige, formerly Diplomatist on behalf of France in South America, 55, Rue Taitbout.**

**CONSEIL DE SURVEILLANCE IN PARIS.** His Excellency General SANTA CRUZ, Ex-President of Bolivia and Peru, and now Minister-Plenipotentiary from Bolivia to the Court of France, Faubourg St. Honore. DON FRANCISCO DE RIVERO, Chargé d'Affaires of Peru in France. M. ALDICE D'ORIGNY, Doctor of Science, Knight of the Legion of Honour, Rue St. Dominique, St. Honore. LE COMTE GUERON DE RANVILLE, Chairman of the Versailles Railway. M. MONTANE, banker at Lima, Paris, and Bordeaux, Membre du Corps Legislatif, Paris.

M. E. LECOMTE, Membre du Corps Legislatif, Paris.

M. CHAPER, formerly Secretary-General to the Tours à Nantes Railway Company.

M. BONNEAU DU MATHY, Capitaine d'Etat Major, Rue de l'Idy.

**COMMITTEE OF MANAGEMENT IN LONDON.** DON MARIANO DE LA FUENTE, Attaché to the Peruvian Legation in London, 15, Upper Montague-street.

Sir JOHN R. N. CAMPBELL, K.C.H., Director of the London and Provincial Bank, Harley-street, Cavendish-square.

WILLIAM HENDERSON, Esq., Park-place, Villas, Malda-hill West.

CHARLES HENRIAGE, Esq., 3, Cadogan-place.

W. D. SEYMOUR, Esq., M.P., Thurloe-square, Brompton.

CLEMENT TAYLOR, Esq., 26, Cornhill, London, E.C.

ALEX. WATKINS, Esq., Director of the Tavy Colliery Company, 61, Moorgate-st.

**BROKERS.**—Messrs. Brunton and Son, Auction Mart; Messrs. Katon and Wood, 1, Crown-court, Threadneedle-street.

**BANKERS.**—In Paris: Messrs. Montané and Co., 13, Rue Grange, Bateliere. In London: London and County Joint-Stock Bank.

**AUDITORS.**—Charles Wood, Esq., 9, Tokenhouse-yard; James Fahey, Esq., 15, York-place, Brompton.

**SECRETARY.**—Mr. Henry James Castle, Associate of the Institution of Civil Engineers. JUDICIAL COUNCIL IN PARIS.—M. Gaudry, barrister, leader of the bar; M. Bellant, solicitor.

**SOLICITORS IN LONDON.**—Messrs. Chilton, Burton, and Johnson, 7, Chancery-lane. OFFICES.—IN PARIS: 33, RUE TAITBOUR.—IN LONDON: 70, CORNHILL.

This company, established with the full support and concurrence of the Peruvian Government, is formed for the purpose of washing and working for gold upon several highly valuable freehold concessions along the rivers and streams in the province of Carabaya, in Peru, embracing an extent of nearly 75 miles, together with the auriferous lands of Moncerata and Apomora, the former of which have been some time under work, and according to the Government journal *El Comercio de Lima*, has realised 100,000 fr. for four days' work, by ten persons. Soundings also have been made in the river, and several nuggets or pebbles of gold have been obtained, one of them of 4 lbs. weight.

The chief families in Peru, as well as parties holding the highest official appointments in the Government, are among the concessionaries.

The terms upon which the important concessions are agreed to be transferred to the Company are extremely favourable, and are now in progress of execution.

Correspondence has taken place between the Company and the Peruvian Legations at Paris and London confirmatory of all the representations made by the concessionaries, and assuring the officers concerned in representing the Peruvian Government, and other agents of the Government, of the direct countenance and support of the diplomatic and other agents of the Government.

The appointment of all engineers, agents, and servants of the company, and the entire disposal of the capital, is to be subject to the approval of the English Committee.

A certified copy of the Act and of the necessary official documents, as well as samples of the gold, can be seen on application to the secretary, and full prospectuses may be obtained at the Company's offices, or from the brokers, to whom application for shares may be addressed in the following form:—

To the Committee of Management of La Peruvienne Gold Mining Comp. of Carabaya.

I hereby request to have allotted to me shares of £1 each in the above Company, and I agree to accept the same, or any portion thereof, and to pay the amount thereof when required.

Name in full.....

Address.....

Signature.....

Reference.....

## THE MONARCH GOLD MINING COMPANY OF AUSTRALIA.

The attention of the shareholders in the above company is directed to the recent discoveries of gold upon the Australian Agricultural Company's estate, on the Peel River, which takes its rise on the Great Dividing or Liverpool Range. It appears that the Government officers concerned in representing the Peel River Estate, of 513,000 acres, to be one vast gold-field, and that it is impossible to estimate its wealth. Specimens of ordinary fragments of quartz, found on the surface by the Commissioner, whilst riding over the property, were tested at Sydney, and yielded 8½ lbs. of gold, or the value of £350, to the ton of quartz. Since the advices from the colony to this effect, the 10,000 shares of the company, with only £35 paid on each, have realised £300, thus giving a marketable value of £3,000,000 to a property which a few weeks since was only about £50,000.

It will be recollected that one of the Monarch Company's estates (comprising about 2500 acres, and held on lease for 21 years, at a royalty of 1-20th) is situated at the foot of the Great Dividing Range, and bounded on the north for several miles by the River Page, which, like the Peel, has its source in the Great Dividing Range. This land was selected in consequence of information received from a gentleman thoroughly acquainted with the colony, that the Great Range abounded in auriferous quartz; gold had also been found in the Hunter River (of which the Page is a tributary), and it was fairly assumed that gold would also be discovered nearer the source of the river. The company also hold a lease upon the same advantageous terms of 550 acres, near Lamb's Valley, on the Alleen and Patterson (also tributaries of the Hunter River); it was on the Alleen, a little to the north of this property, that Mr. Boydell found 13 lbs. weight of gold in one piece. A license to search for and obtain golds also held upon the same terms, of about 10,000 acres, situated near Lake Bathurst.

It will also be recollected that the company was fortunate in securing the experience and services of Mr. Robert Dixon, who was engaged for 15 years under Sir Thomas Mitchell, the Surveyor-General, in surveying, and publishing a map of the colony, and who, in 1846, offered to conduct the then Governor-General to the auriferous formation in three distinct places on the Great Dividing Range, simply upon payment of his expenses. The offer, however, was declined by Sir George Gipps, on the ground that the funds to devote to such a visionary purpose. Arrangements upon a mutual principle were entered into with Mr. Dixon, and a staff of assayers, mechanics, and labourers of tried ability and integrity. The company thoroughly equipped the staff, and engages to find rations for 12 months for a moiety of the gold to be obtained; Mr. Dixon, with the chief assayer, sailed in the *Carnatic* on the 16th Sept., and was followed on the 9th Oct. in the *Circassia*, by the mining staff, under the escort of Lieutenant Sanders. An additional number of hands embarked on board the *Circassia* at their own expense, upon the promise of employment, under the company's auspices, upon their arrival at Sydney. Both vessels have been spoken with—the *Carnatic* on the 16th Oct. in V. south, the *Circassia* on 24 Nov., in 13° north lat.

Messrs. Elsworth and Co. are the company's agents at Sydney, and the following is an extract from a letter to their agents in London—Messrs. Irving, Elsworth, and Holmes:—

Sydney, July 27, 1852.—We accept with pleasure the agency of the London and Sydney (now the Monarch) Gold Mining Company, and congratulate the promoters on the appointment of our friend, Mr. Robert Dixon, as surveyor, as it would not have been possible to have fixed upon a man more experienced as to the places in which gold is likely to be worked with advantage. We shall no doubt shortly be put in possession of the directors' views. We consider that the capital, judiciously managed, would be sufficient to purchase outright enough land, and to erect buildings and machinery for crushing the quartz and amalgamating the gold. An indifferent selection ought to make £10,000 per annum, but should the Bathurst quartz bring anything like the value given to it by parties who have experimented upon it (and they say, from average samples) the profits of the speculation will be enormous. The board will be put in possession by us of every information on the subject; and you can assure the parties interested that everything shall be managed as economically as possible. We hope that arrangements have not been made for the purchase of any particular land, as in some of the schemes that have been started parties are expecting gold to be found where, up to the present time, not a particle has been seen. From what Mr. Dixon knows of the colony, we do not expect he will have erred; should the selection have been made by him; but, nevertheless, he could better do upon a good spot by going direct to the diggings, and carrying on operations where the roads are connected with the metropolis.

Arrangements in the colony have, of course, been left entirely at the discretion of Mr. Dixon.

2, Winchester-buildings, City, December 23.

Now ready, a

## MAP OF THE GOLD FIELDS OF NEW SOUTH WALES

and VICTORIA, from the latest and most authentic sources. Published (per favour of the Union Bank of Australia) by Royston and Brown, export stationers, and copying machine manufacturers, 41, Old Broad-street, London. Price 2s. 6d. plain, 4s. coloured (forwarded by post, 6d. extra); mounted on rollers and varnished, 2s. extra.

Also, just published, price 1s. 6d., new edition, the AMERICAN TARIFF; Duties on Imports into the United States.

## SOUTH AUSTRALIAN COPPER MINING COMPANY.—Notice

is hereby given, that the COMMITTEE OF MANAGEMENT, appointed at an Extraordinary General Meeting of the shareholders on the 6th inst., have RESOLVED as follows:—

1. That all shares in the company be duly registered in the Cost-book of the company.

2. That notice of the same be given by public advertisement, requiring the shares to be sent in to the offices of the company for registration accordingly.

3. That a *pro rata* allotment of the unappropriated shares in the company be made at par, in respect of every share so sent in for registration, as aforesaid, on or before Tuesday, the 18th day of January, 1853; but that all shares not sent in for registration, as aforesaid, on or before the said 18th day of January, be absolutely excluded from all benefit of such allotment.

Notice is therefore given, that all shareholders are required to SEND in their SHARES FOR REGISTRATION accordingly. The Committee of Management beg to intimate to the shareholders, that THOSE ONLY WHO ARE REGISTERED will be ENTITLED to the BONUS arising from the premiums realised on the shares already sold, which, under the authority of a meeting of the shareholders, might be divided among them.—Dated this 1st day of December, 1852.

By order of the Committee of Management.

J. THOMPSON, Chairman. SAM'L H. ARMITAGE, Purser.

17, Gracechurch-street, London.

## THE AUSTRALIAN MINING COMPANY.

At an EXTRAORDINARY GENERAL MEETING of the SHAREHOLDERS in this company, held at the London Tavern, in the City of London, on Thursday, the 30th December, 1852, "to receive the Directors' Report on the result of Captain John Hitchens' inspection of the company's property in Australia," the Directors' Report having been read, the following resolutions were unanimously adopted:—

That the Directors' Report be received and adopted, and that it be printed and circulated amongst the shareholders.

That the best thanks of the proprietors be given to Captain John Hitchens, for his able and valuable services to the company.

That the warm thanks of this meeting be given to Robert Davenport, Esq., for the valuable aid he has given to the company's agents in the colony.

That the warmest thanks of the meeting be given to the chairman and directors, for their highly satisfactory report, and for their zealous and able services in the management of the business of the company.

By order of the meeting, THOMAS W. PLUM, Secretary.

December 31, 1852.

## AUSTRALIAN AURIFEROUS ORE REDUCTION GOLD

MINING COMPANY.—ADVISES from the Company's agent at Melbourne have this day been RECEIVED, from which it appears that he has been compelled to send up this company's affairs in the colony, and that he intends to return by the first vessel. Notice is hereby given, that immediately on the agent's arrival in London, the Company's ACCOUNTS WILL BE MADE UP, and the ASSETS DIVIDED amongst the shareholders.

By order of the Committee, ROBT. FAVELL, Secretary and Purser.

2, Walbrook-buildings, Walbrook, London, Dec. 27, 1852.

The agent's letters are open for inspection by the shareholders at the company's offices.

## AGUA FRIA GOLD MINING COMPANY.

The Directors have pleasure in informing their shareholders that advices received to-day from the manager, Mr. Hepburn, state that an agreement with Messrs. Palmer, Cook, and Co. has been executed, under which that firm renounce all right to the undivided shares, in number 16,667, in consideration of receiving £1 per share, by instalments of 25 per cent. on the net profits of the Agua Fria Mine. By this arrangement, an agreement which the Directors have reason to hope has been by this time carried out with the Gold Hill Company will be unlogged by any division of profits to these shares. The Directors think it right to add, that the private accounts received by them of the Agua Fria Mine itself are very encouraging.

3, Old Broad-street, Dec. 28, 1852.

By order, WM. J. VIAN, Secy.

## MARIQUITA AND NEW GRANADA MINING COMPANY.

Notice is hereby given, that a SPECIAL GENERAL MEETING of the shareholders of the Mariquita and New Granada Mining Company will be HELD at the London Tavern, Bishopsgate-street, on Tuesday, the 11th January, at Two o'clock precisely, for the purpose of receiving a statement of the Company's proceedings to the present time, of declaring a dividend for the half-year, and of authorising the issue of the remaining 50,000 shares of the Company's capital, in conformity with the provision of the Decree of Settlement.

L. H. JONES, Secretary.

17, Gracechurch-street, Dec. 29, 1852.

## MARIPOSA ESTATE.—I, the Undersigned, THOMAS DENNY

SARGENT, do hereby notify to all whom it may concern, that ALL MATTERS IN DISPUTE between Col. JOHN CHARLES FREMONT and MYSELF, in reference to the above-mentioned Estate, have been ENTIRELY SETTLED. That I have received from the said John C. Fremont the amount of \$25,000, which was paid by me to Col. Benton, on account of the purchase. That I have CONSENTED to the BILL filed by me in the Court of Chancery against the said John Charles Fremont, for the completion of the sale of such estate, being DISMISSED; and that I RENOUNCE ALL RIGHT whatever to the said Estate, and all CLAIMS whatever against the said John Charles Fremont, or against the said Col. Thomas H. Benton, in respect thereof.

THOMAS DENNY SARGENT.

Dated this 24th day of November, 1852.

## THE GOLDEN MOUNTAIN OF MARIPOSA MINING COMPANY OF CALIFORNIA.

Notice is hereby given, that the ORDINARY GENERAL MEETING of this Company will be HELD on Wednesday, the 5th day of January, 1853, at the office of the Company, 72, King William-street, City, at Two o'clock precisely.

By order, WM. NICHOLLS, Secretary.

London, Dec. 27, 1852.

## THE ALBION GOLD MINING COMPANY.

For working the Gold Mines on Burns' Creek, and the Quartz Gold Veins, under a conveyance in fee-simple of 1000 acres, near Quartzburgh, Mariposa, California.

Capital £100,000, in 100,000 shares of £1 each, to be paid up in full, without further liability.

**ON THE COST-BOOK SYSTEM.**—Requiring no Deed of Settlement.

Neither the Directors nor any co-Adventurers will have power to contract debts to bind this Company in California, there being a law against it in that State.

TRUSTEES.

The MARQUESS OF DONEGALL, G.C.H. & P.C.

Sir ROBERT PRICE, Bart., M.P.

DIRECTORS.

Sir ROBERT PRICE, Bart., M.P., Foxley Park, Herefordshire; and Stratton-street, Piccadilly.

The Most Hon. the MARQUESS OF DONEGALL, G.C.H. & P.C. (Lord-Lieutenant of the County of Antrim), Ormeau Park, Antrim; and 6, Portland-place.

Serjeant FRANCIS S. MURPHY, M.P., 3, Serjeant's Inn. [Hampstead.]

MATTHEW CRAWFORD, Esq., B.A., Middle Temple; and Haverstock Hill.

HENRY W. WOOD, Esq., Briton Ferry, Glamorganshire.

**BANKERS.**—Messrs. Price, Marryat, and Co., 3, King William-street, City; Messrs. Cocks, Biddulph, and Co., 43, Charing Cross.

**CONSULTING MINING ENGINEER.** David T. Ansted, Esq., F.R.S., F.G.S., Professor of Geology, King's College.

Secretary.—George Jackson, Esq.

**OFFICES.**—3, COTHALL BUILDINGS, BANK.

Application for shares to be made, in the usual form, to the secretary, at the company's offices, where prospectuses may be obtained.

## FORM OF APPLICATION FOR SHARES.

To the Directors of the Albion Gold Mining Company.

GENTLEMEN,—I request you will allot me shares of £1 sterling each in the above undertaking, the whole of which, or any less number that may be allotted to me, I hereby agree to accept, and when required to pay the amount thereon, and subscribe the Cost-book of the company



## THE MINING SHARE LIST.

Shares.	Mines.	Paid.	Last Price.	Present.	Dividends per Share.	Last Paid.
1234	Alfred Consols (copper), Phylack	£10	213 1/2	13 1/2	£5 8 0	20 7 6—Nov., 1852.
1235	Alt-y-erib (silver-lead), Talyllyn, Wales	4	2		0 7 6	0 5 0—Jan., 1851.
1236	Angiesse Coal Company	4	2 1/2		0 10 0	0 2 0—Nov., 1852.
1237	Ballewidden (tin), St. Just	11 1/2	10		10 9 0	0 5 0—Dec., 1852.
1238	Bedford United (copper), Tavistock	2 1/2	9 1/2	9 1/2	0 2 6	0 2 0—Nov., 1852.
1239	Black Cross (lead), Kirkcubrightshire	5	3 1/2	3 1/2	750 0 0	—May, 1849.
1240	Bonesswell Downs (tin), St. Just	100	265		470 10 0	8 0 0—Nov., 1852.
1241	Botallack (tin, copper), St. Just	182 1/2	10 1/2		0 5 0	0 5 0—June, 1851.
1242	Bryntall, Llanidloes, Montgomeryshire	3 1/2	10 1/2		1 8 0	0 4 0—Sept., 1847.
1243	Callington (lead, copper), Callington	27 7 1/2	2 1/2		212 0 0	3 0 0—Nov., 1852.
1244	Carn Breva (copper, tin), Illogan	15	18	18		
1245	Condamor (copper), Gwennap, Cornwall	75	18			
1246	Condamor (copper, tin), Camborne	20	100	100	25 0 0	3 0 0—Dec., 1852.
1247	Cook's Kitchen (copper, tin), Illogan	15 1/2	2 1/2			
1248	Cwmystwith (lead), Cardiganshire	60	190		15 0 0	5 0 0—Dec., 1852.
1249	Devon Great Consols (copper), Tavistock	1	400		255 0 0	10 0 0—Nov., 1852.
1250	Ding-Dong (tin), Illogan	1	6		35 0 0	—1847.
1251	Dolcoath (copper, tin), Camborne	25 1/2	56		555 14 0	—Jan., 1852.
1252	East Darwen (lead), Cardiganshire	28	80		2 0 0	2 0 0—July, 1852.
1253	East Pool (tin, copper), Pool, Illogan	24 1/2	165		235 0 0	—1843.
1254	East Wheal Crofty (copper), Illogan	125	65		440 0 0	
1255	East Wheal Rose (silver-lead), Newlyn	50	245		2245 0 0	10 0 0—March, 1852.
1256	Fenton Pottery Coal and Iron	6	9		1 4 0	0 12 0—Aug., 1852.
1257	Fowey Consols (copper), Tywardreath	40	30			
1258	General Mining Co. for Ireland (cop., lead)	1 1/2	3		0 17 5	0 1 8—Dec., 1852.
1259	Goginan (lead), Cardiganshire, Wales	8	6 1/2		22 0 0	
1260	Gonnamena (copper), St. Cleer	12 1/2	10 1/2	10	0 7 6	0 7 6—Dec., 1852.
1261	Great Consols (copper), Gwennap	1000	200		353 6 8	—Jan., 1851.
1262	Great Ouslow Consols, Camelford	1 1/2	4 1/2		0 2 0	0 2 0—June, 1852.
1263	Great Polgoth (tin), St. Austell	8	4 1/2	4 1/2	0 4 0	0 4 0—Oct., 1852.
1264	Great Work (tin), Gernoe	100	170		149 0 0	7 10 0—Nov., 1852.
1265	Herodford (lead), near Liskeard	8 1/2	5		0 7 6	0 2 6—Aug., 1851.
1266	Holmshush (lead), Callington	24	21		25 0 0	—Feb., 1844.
1267	Holyford (copper), near Tipperary	11	7		3 3 0	0 5 0—Sept., 1852.
1268	Jaamaica (lead), Mold, Flintshire	279 1/2	5		224 0 0	—
1269	Kirkcubrightshire (lead), Kirkcubright	9 1/2	5	4 1/2	0 15 0	0 10 0—Dec., 1852.
1270	Lewis (tin, copper), St. Erth	17	13 1/2		2 0 0	0 10 0—Aug., 1851.
1271	Levant (tin), St. Just	2 1/2	135		1036 0 0	2 0 0—Feb., 1852.
1272	Liaburne (lead), Cardiganshire, Wales	75	650		985 0 0	15 0 0—Sept., 1852.
1273	Low's Patent Copper Smelting Company	9	10		1 0 6	0 4 6—July, 1852.
1274	Mertlyn (lead), Flint	2 1/2	3 1/2	4 1/2	1 2 0	0 4 0—Oct., 1852.
1275	Milwr (lead), Flint	150	175		10 0 0	10 0 0—Oct., 1851.
1276	Mining Co. of Ireland (copper, lead, coal)	7	14 1/2	14 1/2	7 14 0	0 3 6—June, 1852.
1277	North Pool (copper, tin), Pool	22 1/2	235	225	256 10 0	7 10 0—Oct., 1852.
1278	North Roazark (copper), Camborne	10	130		237 10 0	2 10 0—Sept., 1852.
1279	North Wheal Bassett (copper, tin), Illogan	—	10 1/2		1 6 0	0 5 0—Nov., 1852.
1280	Par Consols (copper), St. Blazey	1 1/2	17	17	22 1 0	0 16 0—Oct., 1852.
1281	Perran St. George (cop., tin), Perranabuloe	21 1/2	40		1 15 0	0 10 0—June, 1851.
1282	Phenix (copper, tin), Llanidloes	30	750		240 0 0	15 0 0—Sept., 1852.
1283	Polbreva (tin), St. Agnes	15	13	13	4 5 0	1 0 0—Dec., 1852.
1284	Providence Mines (tin), Uney Lelant	20 1/2	22 1/2		18 14 6	0 10 0—Nov., 1851.
1285	Rix Hill (tin), Tavistock	3 1/2	3 1/2	3 1/2	0 4 0	0 4 0—Oct., 1852.
1286	Rorington (lead), Snailbush, Shrewsbury	66	1		0 10 0	—July, 1852.
1287	South Caradon (copper), St. Cleer	2 1/2	135	140	265 0 0	2 10 0—Nov., 1852.
1288	South Tamar (silver-lead), Beerferris	16 1/2	4 1/2	5 1/2	0 10 0	0 5 0—Oct., 1852.
1289	South Tregurth (copper), Redruth, Cornwall	16	190		56 0 0	5 0 0—Dec., 1852.
1290	South Wheal Frances (copper), Illogan	37 1/2	184	185	205 15 0	6 0 0—Nov., 1852.
1291	Spearhead Consols (tin), St. Just, Cornwall	1 1/2	10 1/2		7 11 0	0 10 0—Dec., 1852.
1292	St. Agnes and Gwyls (copper, tin), Breage	3	7 1/2		0 17 6	0 7 6—April, 1852.
1293	St. Ives Consols (tin), St. Ives	80	125		875 0 0	4 0 0—Aug., 1852.
1294	Stray Park and Camborne Vein (copper)	16	8 1/2		11 10 0	
1295	Tamar Consols (silver-lead), Beeralston	4 1/2	4 1/2	4 1/2	2 11 0	0 6 0—July, 1849.
1296	Tinroff (copper, tin), near Pool, Illogan	7	12 1/2		6 8 0	0 10 0—Aug., 1852.
1297	Trehane (silver-lead), Menheniot	6 1/2	15	15	14 7 6	0 10 0—Nov., 1851.
1298	Trevellick Consols (copper), Redruth	50	2 1/2	2 1/2	1 3 0	0 5 0—Dec., 1849.
1299	Trevellick (copper), Gwennap, Cornwall	32 1/2	13 1/2		462 10 0	—April, 1851.
1300	Trevellick (copper), Gwennap, Cornwall	130	125		293 0 0	5 0 0—Nov., 1852.
1301	Trevellick and Barrier (copper), Gwennap	130	135		25 0 0	5 0 0—Dec., 1852.
1302	Trumpet Consols (tin), near Helston	95	135		25 0 0	5 0 0—Dec., 1852.
1303	United Mines (copper), Gwennap	40	385	380	13 15 0	8 15 0—Nov., 1852.
1304	Wellington (copper, tin), Perranabuloe	7 1/2	8		2 2 6	0 5 0—March, 1851.
1305	West Caradon (copper), Liskeard	20	205		198 5 0	6 0 0—Dec., 1852.
1306	West Providence (tin), St. Erth	5	54	52 53 54	15 10 0	2 10 0—Dec., 1852.
1307	Wheal Bassett (copper), Illogan	10 1/2	530	535	350 0 0	15 0 0—Dec., 1852.
1308	Wheal Brewer (copper), Gwennap	4	22	20	5 0 0	
1309	Wheal Buller (copper), Redruth	5	800		220 0 0	20 0 0—Sept., 1852.
1310	Wheal Clifford (copper), Gwennap	—	150		1 8 2	1 8 2—Dec., 1852.
1311	Wheal Exmouth and Adams United	4 1/2	8 1/2		0 7 6	0 2 6—Dec., 1852.
1312	Wheal Fionn (tin), St. Agnes	70	125		5 0 0	5 0 0—Sept., 1852.
1313	Wheal Friendship (copper), Devon	120	125		2339 10 0	8 0 0—Feb., 1852.
1314	Wheal Golden (silver-lead), Perranabuloe	3	8 1/2		1 5 0	0 5 0—Sept., 1852.
1315	Wheal Jane (silver-lead), Kest	8	4 1/2		1 0 0	0 1 0—Oct., 1852.
1316	Wheal Level (tin), Wendron	33	60		17 10 0	2 10 0—Oct., 1852.
1317	Wheal Margaret (tin), Uney Lelant	79	117		196 0 0	2 10 0—May, 1852.
1318	Wheal Mary Ann (lead), Menheniot	5 1/2	28	26 30 32	23 5 0	1 0 0—Sept., 1852.
1319	Wheal Owses, St. Just, Cornwall	70	125		72 13 0	12 1 3—Nov., 1852.
1320	Wheal Reeth (tin), Uney Lelant	20 1/2	50		40 10 0	3 0 0—Dec., 1852.
1321	Wheal Seta (copper), Gernoe, Cornwall	107	200		227 10 0	1 0 0—Nov., 1852.
1322	Wheal Trevellick (silver-lead), Liskeard	107	52	52 55 60	26 10 0	2 0 0—May, 1851.
1323	Wheal Tremayne (tin, copper), Gwennap	9 1/2	35		9 5 0	0 10 0—Dec., 1852.
1324	Wicklow (copper), Wicklow	5	41 1/2	42 1/2	18 13 0	1 3 0—Aug., 1852.

## FOREIGN MINES.

Shares.	Mines.	Paid.	Last Price.	Present.	Dividends per Share.	Last Paid.
3600	Alten Mining Company (copper), Norway	£14 1/2	4 1/2	4 1/2	3 10 0	0 10 0—Dec., 1852.
7200	Baden, Grand Duchy of	25	4 1/2	4 1/2	0 1 0	0 1 0—Nov., 1852.
10000	Brazilian Imperial (gold), Brazil	25	4 1/2	4 1/2	34 17 6	—Dec., 1844.
2400	Burra Burra (copper), South Australia	5	125	127	120 0 0	5 0 0—Sept., 1852.
12000	Cobre Copper Company (copper), Cuba	40	42	42 1/2	53 12 0	2 0 0—July, 1852.
10000	Copiapu Mining Company (copper), Chili	14	7 1/2	7 1/2	3 18 0	0 5 0—Oct., 1851.
20000	General Min. Assoc. (iron, coal), Nova Scotia	30	15 1/2		7 10 0	0 5 0—June, 1852.
5000	Linares (lead), Pozo Ancho, Spain	3	8	8 1/2	0 3 0	0 3 0—Sept., 1852.
2700	Marmato (gold), Colombia	2 1/2	12		4 0 0	0 5 0—July, 1852.
20000	Mexican and South American (cop.), Mexico	12	4 1/2	4 1/2	33 4 0	—July, 1846.
7000	Royal Santiago (copper), Cuba	12	29 1/2	29 1/2	19 7 6	2 0 0—Nov., 1852.
11000	St. John del Rey (gold), Brazil	15	29 1/2	29 1/2	1 12 6	0 7 6—Feb., 1850.
43174	United Mexican (silver), Mexico	28 1/2	9 1/2	9 1/2		

## MINES WHICH HAVE SOLD ORES.

Shares.	Mines.	Paid.	Last Price.	Present.	Dividends per Share.	Last Paid.
6000	Ashford Consols (sil.-lead, cop.)	1	1			
4000	Altaraun Con. (tin, cop.), Altaraun	1	1			
4000	Augusta Con. (cop.)	1	1			
900	Bainoon Con. (tin), Uney Lelant	1	1			
5000	Bel Hole, Worthy, Salop	1	1			
500	Bel and Llanarth, Gwennap	8 1/2	5			
5000	Bellavon (iron), South Wales	50	10			
6000	Bishopstone (lead), Gwennap	1 1/2	1 1/2			
955	Bodmin Con. (tin), Wadebridge	7	7			
6144	Bodmin West Downs (tin, cop.)	1	1			
1024	Bodmin W. Mary (cop.), Bodmin	1 1/2	1 1/2			
120	Bollwall and Nanpess (tin)	20	18			
4000	Boringdon (copper), Plympton	2 1/2	3 1/2			
240	Boscon (tin), St. Just	1	1			
5250	Bottle Hill (copper), Plympton	2	1			
14000	Braich Goch Slate Quarries	1	1			
6000	Bronfild (lead), Wales	1	1			
8790	Bryn-Arian (lead), Cardiganshire	3 1/2	3 1/2			
—	Budnick Consols (tin), Perran	6 1/2	8			
1500	Bustarpo (tin, cop.), Gwennap	1	1			
2400	Brish (sil.-lead), Cardiganshire	4	3			
7000	Cae-Gwyn, Cardiganshire	1	1			
1024	Campbell and Carnon, S. Wales	3	4			
3000	Cally (cop., lead), Kirkcubright	1	1			
4000	Calstock Consols (copper)	4 1/2	1 1/2			
2000	Carbona (tin, copper), Gwennap	5	5			
2045	Carnyvon (tin), St. Just	1 1/2	1 1/2			
3000	Cartwhe (cop., lead), Wadebridge	6 1/2	6 1/2			
1656	Carvansall (copper), Gwennap	3 1/2	3 1/2			
200	Cefn Braw (lead), Cardiganshire	8 1/2	8 1/2			
6000	Charlestown United, Cornwall	3	3			
1230	Chyprase (tin, cop.), St. Enodur	4 1/2	9			
1024	Clijah & Wentworth (tin, cop.)	4	5 1/2			
2000	Coed Mawr Pool (lead), Llanrwst	10	10			
900	Court Grange, Cardiganshire	10	9			
600	Craig-y-Mwyn (lead), Llanidloes	8 1/2	7			
350	Craze and Bawlas, Camborne	25	19	17 1/2		
812	Creeg Bawn (copper), Cornwall	13	20			
6000	Crookhatch (copper), Cornwall	1	1			
8000	Cubert (silver-lead), Cornwall	1 1/2	1 1/2			
10000	Cwm Daren (lead), Cardiganshire	1 1/2	1 1/2			
1000	Cwm Erif (lead), Cardiganshire	8	2			
2000	Cyfnedd Fawr, Llanegryn	1	1			
3000	Dalrhew (cop., lead), Brecon	1 1/2	4			
1650	Darwin (sil.-lead), Cardiganshire	4 1/2	3 1/2			
7800	Derwent (sil.-lead), Durham	12	4			
3007	Devon and Courtney (copper)	3 1/2	1			
1624	Devon & Cornwall United (cop.)	7 1/2	2			
1800	Devon Great Tineroff (tin)	3	3			
6000	Devon Kapunda (cop., sil.-lead)	3 1/2	3 1/2			
4000	Doifwynog (cop.), Merioneth	1	1			
128	Drift Moor (tin), Sancerre	4	4			
4000	Duke of Cornwall (tin), Lydford	1	1			
5000	Dyffryn (lead), Wales	11 1/2	12			
4000	East Alfred Consols (lead, cop.)	1	1			
1300	East Basset (copper), Redruth	18	1			
1345	East Basset (cop.), Tavistock	6	3 1/2			
1100	East Fronsley (lead)	1 1/2	2 1/2			
4000	East Gwyls (lead, cop.)	1 1/2	2 1/2			
1924	East Halamming (tin)	1	4 1/2			

Shares.	Mines.	Paid.	Last Price.	Present.	Dividends per Share.	Last Paid.
3045	Penitro Glaze (silver-lead)	5 1/2	3			
1024	Penance Con. (tin), Sancerre	5 1/2	3	3 4		
1020	Peter Tavy & Mary Tavy (cop.)	5 1/2	4			
3020	Peñar & Tavares (tin), Tavares	10	10			
3000	Porkells United (tin), Wendron	10	10			
1024	Prad Con. (tin), Towdnack	1 1/2	1 1/2			
6400	Prideaux Wood, Luxillion	1 1/2	3 1/2	3 1/2		
3072	Prince Albert, Penzance	2	2			
450	Raleigh, (tin, copper), Crown	5 1/2	5			
7000	Reeth Consolidated, Towdnack	1 1/2	1 1/2			
1500	Rewdell & Barchard (lead)	12	15			
5000	Roche & Trevelin (tin)	25 12	3			
250	Rosewarne (cop., tin), Gwinn	3 1/2	4 1/2			
5000	Round Hill, Salop	3	3			
1024	Sidney Godolphin (cop.), Breage	5 1/2	5 1/2			
4000	Sithney Wheel Buller (tin)	1	4	3 1/2		
2000	South Carn Brea (cop.), Illogan	11	7 1/2			
250	South Chatterton, St. Agnes	8	6	6 1/2		
5000	South Crever (copper)	1	1			
4190	South Friendship (lead, ant.)	2 1/2	2			
2000	South of Scotland	2	2			
300	South Speed, Uny Lelant	25	25			
250	South Wheal Josiah, Calstock	2	1 1/2			
280	Spearman Moor (copper), St. Just	30	30			
	St. Blazey Consols, St. Blazey	—	—	—		
2000	St. Day United (tin & copper)	2	3	2 1/2		
399	St. Ewe (tin), Llanidloes	1	1			
444	Tary Con. (cop.), near Tavistock	28 1/2	3	3		
4800	Tees Side (lead), Cumberland	1 1/2	1 1/2	2 1/2		
1000	Tokensbury Con. (cop.), St. Ives	8 1/2	1 1/2	1 1/2		
1024	Trannack and Bosnone, St. Erth	6 1/2	10 1/2			
10000	Trannack United Mines (tin, cop.)	1	2			
1024	Trebarrah, Penzance	2	8 1/2			
145	Tregodred, Wadebridge	25	5			
2048	Trebell Con. (tin, cop.), Lanivet	3 1/2	3 1/2			
1000	Treloweth (copper), St. Erth	6 1/2	6 1/2			
572	Trelyn Consols, (tin), St. Ives	6 1/2	5 1/2			
2048	Trevelyan (tin, copper)	3	4			
4000	Tyny-Worlogh (slate), Carnar.	4 1/2	3 1/2			
2000	Union (tin), Roche & Luxillion	1 1/2	1 1/2	2 1/2		
1000	Ditto (paid up)	1	1 1/2			
1024	United Mines (cop., tin), Tavis.	12 1/2	9			
2000	Vale of Towy (tin, cop.)	3	13			
5000	Warleggan Consols (copper)	1	1			
1024	West Abram (copper), Phillack	1	1			
1024	West Alfred (cop.), Phillack	14	36			
6000	West Bassett (copper), Illogan	1 1/2	8			
250	West Damsel (cop.), Gwennap	7 1/2	115			
1024	West Ding-Dong (tin), Sancerre	3 1/2	11 1/2	11 1/2		
6400	West Fowey Con. (tin, cop.), Looe	08 1/2	5d	8 1/2		
2048	West Gwynn, near Tavistock	10 1/2	10 1/2			
1024	West Par Con. (cop.), St. Blazey	10 1/2	9			
6500	West Polgoth (tin), St. Ewe	1 1/2	3			
200	West Seton (copper), Camborne	7 1/2	120			
940	West Tolgus (copper), Illogan	14 1/2	3			
120	West Trevelin, Gwennap	15	12			
5000	West Wheal Alfred (cop.), Hayle	2 1/2	4			
512	West Wheal Frances, Illogan	10 1/2	7			
5000	West Wheal George, Tavistock	3	10			
500	West Wheal Towan (cop., tin)	30	20			
1024	West Wheal Treasury (cop.)	410 4	10	7		
1000	Wheal Agar (copper), Illogan	6	5			
6400	Wheal Anna (tin), St. Austell	1	2 1/2	2 1/2		
1228	Wheal Arthur (silver-lead, cop.)	5	25	30		
3072	Wheal Augustus (tin), St. Just	1 1/2	1	1 1/2		
240	Wheal Bagin (tin), St. Just	6 1/2	5			
389	Wheal Carna (tin), Tavistock	7 1/2	2	7 1/2		
1024	Wheal Carpenter (tin), Gwinn	5 1/2	2 1/2			
1024	Wheal Carpenter, S. Sydenham	7 1/2	3			
1024	Wheal Chiverton (copper, tin)	45 13 9	45			
512	Wheal Constance (lead), Newlyn	3	15			
1024	Wheal Crebor (cop.), Tavistock	6 1/2	15			
1024	Wheal Cupid (copper), Gwennap	3	6			
4500	Wheal Elizabeth (tin), St. Ewe	3 1/2	3			
182	Wheal Ennill (tin), St. Erme	17	14			
1070	Wheal Enys (tin), Wendron	1	1			
764	Wheal Frances, near Tavistock	14 1/2	12			
6000	Wheal Grenville, Camborne	3	3			
10000	Wheal Guskus (tin, copper)	1	1 1/2	1 1/2		
5120	Wheal Harriett, Camborne	1	1 1/2			
250	Wheal Kitty (tin), Uny Lelant	—	7 1/2			
5000	Wheal Kitty (tin), St. Agnes	—	—	—		
6000	Wheal Langford (cop., sil-lead)	—	1 1/2	1 1/2		
1000	Wheal Leno, West Cornwall	1	1			
6144	Wheal Maullin, Llanidloes	1	1			
942	Wheal May (silver-lead, cop.)	4 1/2	3			
250	Wheal Music (copper), St. Agnes	1	1			
908	Wheal Oak (tin), near Helston	2 1/2	1			
8000	Wheal Penhale (lead, copper)	3	1 1/2			
128	Wheal Plenty (copper), Redruth	50	50			
250	Wheal Prudence (cop., St. Agnes)	4 1/2	2			
4000	Wheal Robert, S. Sydenham	1 1/2	1 1/2			
2048	Wheal Robins (tin), Liskeard	1 1/2	2 1/2	2 1/2		
4000	Wheal Russell (cop.), Tavistock	2 1/2	1	1 1/2		
5000	Wheal Ruth (tin), Shepton	2	1			
1024	Wheal Sidney, Plympton	2 1/2	6			
612	Wheal Sophia (sil-lead), Lezant	11 1/2	11 1/2			
1024	Wheal Speedwell (copper, tin)	66 12 3	10 1/2			
1024	Wheal square (copper), St. Erth	5 1/2	2 1/2			
247	Wheal Stanley (tin), Tavistock	1 1/2	1 1/2			
1000	Wheal Nassau, Breage	1 1/2	1 1/2			
6000	Wheal Tehidy (copper), Illogan	1 1/2	3 1/2			
2000	Wheal Tom, Stoke Climsland	0 1/2	1			
4000	Wheal Treasury (copper, tin)	—	—	1		
512	Wheal Trevisis (cop.), Gwennap	13 1/2	20			
3000	Wheal Trevena (tin), Breage	2 1/2	6			
8448	Wheal Trewene (silver-lead)	1 1/2	2			
267	Wheal Tryphena, Camborne	42	18			
6000	Wheal Unity (copper), Redruth	1 1/2	10 1/2			
1024	Wheal Uny (tin, cop.), Redruth	7 1/2	3			
1024	Wheal Vention (sil-lead), Lisk.	64 18 3	3			
4000	Wheal Williams (copper)	—	—	—		
4000	Wheal Zion (cop., lead), Tavist.	1 1/2	4	4		
2048	Wood Mine (sil-lead), Beerfries	1	1			
4000	Whitford (lead), Flint	2 1/2	1 1/2			
2048	Yeoland Consols (tin, copper)	6 1/2	5	8 1/2		
24000	Glenaulin & Carvilleme (copper)	1 1/2	1 1/2	1 1/2		
250	Glyn Wh. Mary, Cardingham	1 1/2	1 1/2			
10000	Golden Mill, Illogan	1 1/2	1 1/2			
12000	Gorn (lead), Llanidloes	12 1/2	1 1/2			
30000	Great Cribbs (copper)	1	1	1 1/2		
512	Great Rough Tor (cop., Cornw.)	37	12			
1024	Great Sheba Consols (tin, cop.)	11 1/2	6			
10000	Gt. Tregone Consols, Altarnun	1	3			
6400	Great West Rosear, Gwiltian	1	2			
5000	Great Whml Agar (tin, copper)	1	4 1/2			
1024	Great Wheal Trevelin (tin)	1	1			
6000	Great Wheal Tunkin (copper)	1	1			
—	Gt. Wh. Vor (tin, cop.), Helston	1	1			
1000	Gurlyn (tin), St. Erth	1	1			
1500	Hennock (silver-lead), Hennock	5 1/2	16			
10000	Hibernian (copper), Ireland	19	1 1/2			
10000	Hill Bridge Consols, Peter Tavy	1	1			
4090	Inney Consols, South Peterwin	1	1			
4090	Island Consols (tin), Gwinn	1	1			
1024	Lantallack (sil-lead), Landrake	1	1			
5000	Marion Mine (cop.), South Zeal	1	1			
240	Mengearne and Freganetis (tin)	8	8			
6400	Michell (lead), Flint	1 1/2	1 1/2			
20000	Mizen Head (copper), Cork	1	1 1/2	1 1/2		
100	Morvah Consols (tin, copper)	4	1 1/2			
6400	Mostyn (lead), Flint	2 1/2	1 1/2			
15040	North Wales (tin), Llanidloes	1	1 1/2			
5000	New Cop. Bottom, Bridestown	1	1 1/2			
2048	New East Crowndale (cop., tin)	2 1/2	1 1/2			
10000	New Polgoth and Woodclase	1 1/2	1 1/2			
4000	Norbury (copper), Salop	1 1/2	1 1/2			
5000	North Britain Burra Burra (cop.)	2 1/2	3			
8500	North Cornwall	2	2			
2500	North Crever (copper)	9	9			
250	North Forey (cop.), Fynewall	1	1			
10000	North Towy & Cystanog (lead)	1 1/2	1 1/2			
1060	North Wheal Trevelyan (lead)	1 1/2	5 1/2	5 1/2		
400	Penhauger (lead), Menheniot	2	2 1/2			
5000	Perran Con. (cop.), Perr. Uthoe	2	4			
—	Perran United, Penzance	—	—	—		
4000	Perran Wheal Jane (tin, copper)	1	1			
5000	Penhale Consols (silver-lead)	3	3			
5000	Penryn Consols (tin), Illogan	1	1 1/2	1 1/2		
1530	Phenix Gt. Con., Llanidloes	1	1 1/2	1 1/2		
50000	Polimstone (cop., gold), Devon	1	1 1/2	1 1/2		
2220	Polzeath Con. (lead), St. Minver	1	1			
2048	Ponterwyd (sil-lead), Cardigan	1	1			
8000	Red Dragon (silver-lead), Wales	1	1 1/2	1 1/2		
2500	Ringaballa (sil-lead), nr. Cork	4	1			
100000	Royal Hibernian (lead), Kerry	1	1 1/2	1 1/2		
350	Silcock Brook (lead), Looe	1	1			
4004	Sourton Con. (copper), Sourton	1	1			
2000	South Alfred Consols	1	1			
20000	South Cork (cop.), Ballydoob	1	1 1/2	1 1/2		
6144	South Phenix	—	—	—		
933	South Plain Wood, Ashburton	66 7 1/2	1 1/2	1 1/2		
—	South-West Phenix (copper)	—	—	—		
2000	South Wales Mining Co. (lead)	1 1/2	2			
1024	South Wheal Alfred (cop.), Gwinn	1	1			
4000	South Wheal Burdick	1	1			
6144	St. Austell Consols (cop. & tin)	1	2 1/2	2 1/2		
512	St. Michael Penkivil (tin)	1	1			
1200	Swanpool, Budock	4 1/2	22			
5000	Temple Con. (tin, cop.), Cornw.	2	2			
4090	Trebragard United (lead, St. Teath)	1 1/2	1 1/2	1 1/2		
1000	Tregadock (lead), St. Teath	4	15	15		
4000	Trematoc (copper), Liskeard	4 1/2	3 1/2			
4000	Tremollett Lead, Stoke Clims.	1	1			
6000	Trevaunt (lime quarries)	1	1 1/2			
1024	Trevelyan (copper), St. Cleer	7 1/2	4 1/2			
4096	Trevallack (silv-lead), Liskeard	60	60			
2500	Trevennis (tin), Wendron	1	1 1/2			
5120	Trevelin and Trevelin (tin)	1	1 1/2			
10000	Tyny-yr-beth (slate)	16	35			
512	Tyny-yr-beth (cop.), St. Blazey	16	35			
5000	Tyward Lead (tin), Llanidloes	1	1 1/2			
3000	United Gwinn & Miners (copper)	1	1			
—	United Iron and Copper, With.	—	—	—		
3750	Vyvyan United (tin & cop.)	1	1 1/2			
1024	West Phenix, Llanidloes	9 1/2	21	21		
1056	West Sharp Tor, Llanidloes	33	110			
2500	West Stray Park, Camborne	2	4			
6240	West United Mills (cop., Illogan)	15 1/2	15 1/2			
1024	West Wheal Trevelin (cop.)	471 15 1/2	15 1/2			
1024	West Wh. Fanny (tin), Zeon	2	3 1/2			
2000	West Wheal Friendship (cop.)	2	2			
2048	West Wheal Robins	2	2			
1024	West Wheal Rose (lead)	2	2			
3072	Weston (lead), Shropshire	3	1 1/2			
6000	Wheal Albert, Calstock	3	3			
6000	Wheal Alty (cop. & c.), Lanivet	1	1			
5000	Wheal Bazel (sil-lead), Calstock	1	1			
1742	Wheal Benks	1	1			
1024	Wheal Catherine, Liskeard	3	3			
6400	Wheal Cocke (cop.), St. Enoder	1	1			
3000	Wheal Dora (tin, cop.), St. Cleer	3	3			
4096	Wheal Edward (cop.), Calstock	1 1/2	1 1/2			
64	Wheal Ellen	1	1			
5000	Wheal Fanny (lead)	1	1			
910	Wh. Fenwick (copper), Mullion	20	1			
5000	Wheel Fortunate, Tavistock	5 1/2	1			
2048	Wheel Fortune (lead), Ludgus	1	1			
5000	Wheel Fortune, South Tawton	1	1			
1536	Wheel Gill (cop., lead), Liskeard	17 10 1/2	5 1/2	5 1/2		
2048	Wheel Hamlyn, nr. Oakenham	1	1			
5000	Wheel Henry, Newlyn	1	1			
1024	Wheel Hill (tin, cop					